

WIN A FUJITSU TABLET PC VALUED AT \$4,399!

1
AUSTRALIA'S
TOP-SELLING
TECHNOLOGY MAGAZINE

PC USER AUSTRALIAN

JULY 2003
\$7.95 inc. GST
NZ\$8.50 inc. GST

Best-value sites and
software on the Net

9.6
TUNSTAL 50 NEWS/LOTTO
PH 9842 2885
C8 \$1.97

TOP 50 ONLINE BARGAINS

PLUS: SOFTWARE MEGA GUIDE
80 home, office and creative
applications tested



PC USER AUSTRALIAN free software mega pack

FREE APPLICATIONS

This month, you'll find a variety of free applications including two free office suites – 602Pro PC Suite 2001 and OpenOffice.org 1.0.3. Plus, free finance software, video editing tools, Web design programs, graphics software and more.

VIDEO GUIDES

Retrieve data from a faulty hard drive: Darren Yates' video tutorial will guide you through the process.

entertainment

TWO FULL CLASSIC GAMES FREE!

Monopoly 1.0,
Mr Boom 3.0
Hot new game demos: Rise of Nations, Star Trek Elite
Force II, Unreal II: The Awakening and Vietcong. Trailers: Mythica and Half-Life 2.

PLUS Complete training series: Grab the latest instalments of these invaluable training courses – VTC's Macromedia Flash 4 and Network Plus Certification, valued at \$299. Antivirus software: Kaspersky Anti-Virus Lite; NOD32 Plus; 40 other Windows, Linux, online and handheld tools.



Xara3D 3

Want a professional-looking Web site? Use this full version of Xara3D to create impressive-looking 3D titles and animations for the Web. As sold for \$70.

VoiceGuide 4.9 Personal

With VoiceGuide and a voice-capable modem you can screen calls, take messages, route calls to specified destinations and more. Register online and get VoiceGuide for free (as sold for \$99).

Schwartz World Cuisine Recipe Book

Discover over 200 mouth-watering recipes from around the world in this electronic cookbook. As sold for \$19.95.



50 PAGES OF REVIEWS:

Top 5 notebooks
under \$3,000

nVidia's FX 5600
and FX 5200

Athlon XP 3200+

The Sims 2,
Half-Life 2 previews

35 PAGES OF TIPS & TRICKS:

Retrieve files from
a failed hard drive

Make a music
video on a budget

Clever spreadsheet
formatting secrets

NUMBER 25 JULY 2003

IF YOUR COVER CD IS MISSING, PLEASE ENQUIRE AT PLACE OF PURCHASE

help station

on the Web: www.pcuser.com.au

ACP



9 313006 001416

07

Every Dell™ system is built to order. This means you only pay for what you want, and nothing that you don't. So for great savings cut out the middleman and get the latest technology delivered straight to your door. That's the Dell difference.



Dimension™ 2350
E•VALUE CODE J210606

Dell® Desktops

Dimension 2350

Free Upgrade to 60GB¹ Hard Drive

Offer valid 14th-27th June 2003

- Intel® Celeron™ Processor 2.2GHz • 256MB Shared DDR SDRAM (Up to 32MB of memory may be allocated to support integrated graphics)
- **NOW** 60GB¹ Hard Drive • Integrated Graphics
- 48X Max CD-RW • 17" CRT Monitor (16.0" v.i.s.)
- 56K Modem • Stereo Speakers
- Microsoft® Windows® XP Home Edition

\$1,199*

By delivery only, standard fee \$99* Prices include GST.
Offer valid 14th-27th June 2003.
E•VALUE CODE J210605 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to Stereo Speakers with Subwoofer for \$75*
- ▶ Upgrade to Microsoft® Windows® XP Professional for \$139*
- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*

Dimension 2350 (pictured above)

Free Upgrade to 60GB¹ Hard Drive

Offer valid 14th-27th June 2003

- Intel® Pentium® 4 Processor 2.4GHz
- 256MB Shared DDR SDRAM (up to 32MB of system memory may be allocated to support system graphics) • **NOW** 60GB¹ Hard Drive
- Integrated Graphics • 48X Max CD-RW
- 17" CRT Monitor (16.0" v.i.s.) • 56K Modem
- Stereo Speakers • Microsoft® Windows® XP Home Edition

\$1,499*

By delivery only, standard fee \$99* Prices include GST.
Offer valid 14th-27th June 2003.
E•VALUE CODE J210606 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to 15" Flat Panel Monitor for \$352*
- ▶ Upgrade to Stereo Speakers with Subwoofer for \$75*
- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*

Dimension 8300

Free Upgrade to DVD²+RW Combo Drive

Offer valid 14th-27th June 2003

- Intel® Pentium® 4 Processor 2.8GHz
- 256MB DDR400 SDRAM
- 60GB¹ Hard Drive
- 64MB nVidia® GeForce™ 4 MX 420 Graphics Card
- **NOW** 16X Max DVD² + RW Combo Drive
- 17" CRT Monitor (16.0" v.i.s.) • 56K Modem
- Stereo Speakers • Microsoft® Windows® XP Home Edition

\$2,199*

By delivery only, standard fee \$99* Prices include GST.
Offer valid 14th-27th June 2003.
E•VALUE CODE J240616 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to 80GB¹ Hard Drive for \$50*
- ▶ Upgrade to 128MB ATI Radeon™ 9800 TX Graphics Card for \$199*
- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*

Dimension 8300

Free Upgrade to 128MB Graphics Card

Offer valid 14th-27th June 2003

- Intel® Pentium® 4 Processor 2.8GHz
- 256MB DDR400 SDRAM
- 80GB¹ Hard Drive
- **NOW** 128MB ATI Radeon™ 9800 TX Graphics Card
- SoundBlaster® Live!™ 5.1 Sound Card
- DVD² + RW Combo Drive
- 17" CRT Monitor (16.0" v.i.s.)
- 56K Modem • Speakers with Subwoofer
- Microsoft® Windows® XP Home Edition

\$2,499*

By delivery only, standard fee \$99* Prices include GST.
Conditions apply. Offer valid until 14th-27th June 2003.
E•VALUE CODE J240617 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to 120GB¹ Hard Drive for 149*
- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*
- ▶ Upgrade to 15" Flat Panel Monitor for \$352*

Dimension 8300

Free Upgrade to 120GB¹ Hard Drive

Offer valid 14th-27th June 2003

- Intel® Pentium® 4 Processor with HT technology 3.0GHz
- 512MB DDR400 SDRAM
- **NOW** 120GB¹ Hard Drive • 128MB ATI Radeon™ 9800 TX Graphics Card • Sound Blaster® Live!™ 5.1 Sound Card • DVD² + RW Combo Drive
- 17" CRT Monitor (16.0" v.i.s.)
- 56K Modem • Speakers with Subwoofer
- Microsoft® Windows® XP Home Edition

\$2,999*

By delivery only, standard fee \$99* Prices include GST.
Conditions apply. Offer valid until 14th-27th June 2003.
E•VALUE CODE J240618 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to Altec Lansing® 4.1 Speakers for \$199*
- ▶ Upgrade to Audigy 2 Sound Card for \$99*
- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*

Purchase Microsoft® Office XP with your new Dell

Did you know that you can get Microsoft® Office XP pre-installed with your Dell computer? It is convenient, affordable and it will come factory installed on your system. You'll save time and have a fully licensed version of Microsoft® Office XP ready to run your applications.

Upgrade from WordPerfect® Productivity Pack to Microsoft® Works Suite 2003 for \$99* inc. GST

Upgrade from WordPerfect® Productivity Pack to Microsoft® Office XP Small Business (includes Word, Excel, Outlook and Publisher) for \$369* inc. GST

Upgrade from WordPerfect® Productivity Pack to Microsoft® Office XP Professional with Publisher (includes Word, Excel, Outlook, Publisher, PowerPoint, and Access) for \$599* inc. GST

Dell™ recommends Microsoft® Windows® XP Professional

T. Available by delivery only. Standard fee \$99 (inc. GST) applies to all systems purchased unless otherwise stated. A standard delivery fee for Axim and advertent errors may occur for which Dell may not be responsible. Prices/offers cannot be combined with any other discount/promotion. Dell, the Dell logo, Dimension, registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. Intel, the Intel Inside logo, Pentium, Celeron, Centrino, X-Scale and names may be used in this document to refer to either the entities claiming marks and names or their products. Dell disclaims proprietary interest in the marks and names day service not available in some remote locations. Contact Dell for details. Technicians shall be dispatched if necessary following telephone technical support. In setting applies to commercial DVD movies only and in no way affects use of DVD media for software applications. 4. The AOL Trial Offer is valid until 27th June Access to AOL requires a credit card & is subject to credit approval. Only one membership per household permitted on this Offer. The three free months are consecutive price currently \$27.95 per month for up to 90 hours access to the AOL Service and \$0.90 for every additional hour in the same billing month plus telecommunications AOL by calling 1800 265 265 (between 8am and 8pm AEST, weekdays) prior to the end of the free trial. Modem required for AOL access.





Inspiron™ 1100 E•VALUE CODE J540601

Dell | Notebooks

Inspiron 1100 (pictured above) From 3.3kg, 45mm thin

Free Leather Carry Case

Offer valid 14th-27th June 2003

- Intel® Celeron™ Processor 2.0GHz • 256MB DDR SDRAM (up to 64MB of system memory may be allocated to support system graphics)
- 20GB¹ Hard Drive • 24X Max CD-RW
- 14.1" XGA Display (1024x768 res)
- Integrated Graphics • 56K Modem
- Microsoft® Windows® XP Home Edition

\$1,899*

By delivery only, standard fee \$99* Prices include GST.
Offer valid 14th-27th June 2003.
E•VALUE CODE J540601 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to 30GB¹ Hard Drive for \$50*
- ▶ Upgrade to 24X Max CD-RW/DVD³ Combo Drive for \$100*
- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*

Easy to buy. Easy to own. Easy as Dell™. If you're looking to buy a new notebook or desktop you want the best value you can find. There's a simple solution, just pick up the phone and call Dell direct or if you know what you want visit www.dell.com.au and configure it online.

Inspiron 5100 From 3.3kg, 45mm thin

Free Leather Carry Case

Offer valid 14th-27th June 2003

- Intel® Pentium® 4 Processor 2.66GHz
- 256MB DDR SDRAM • 30GB¹ Hard Drive
- 16MB DDR ATI Mobility Radeon™ 7500 AGP 4X Graphics • 24X Max CD-RW/DVD³ Combo Drive
- 14.1" XGA Display (1024x768 res) • 56K Modem
- Microsoft® Windows® XP Home Edition

\$2,599*

By delivery only, standard fee \$99* Prices include GST.
Offer valid 14th-27th June 2003.
E•VALUE CODE J540604 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*
- ▶ Upgrade to 15" XGA Display (1024x768 res) for \$99*
- ▶ Add a Second Battery for \$174*

Inspiron 5100 From 3.3kg, 47mm thin

Free Leather Carry Case

Offer valid 14th-27th June 2003

- Intel® Pentium® 4 Processor 2.8GHz
- 256MB DDR SDRAM • 40GB¹ Hard Drive
- 32MB DDR ATI Mobility Radeon™ 7500 AGP 4X Graphics • 24X Max CD-RW/DVD³ Combo Drive
- 15" XGA Display (1024x768 res) • 56K Modem
- Microsoft® Windows® XP Home Edition

\$2,899*

By delivery only, standard fee \$99* Prices include GST.
Offer valid 14th-27th June 2003.
E•VALUE CODE J540605 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to 15" SXGA Display (1400x1050 res) for \$100*
- ▶ Add Stereo Speakers for \$44*
- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*

Inspiron 8500 From 3.1kg, 38mm thin

Free Leather Carry Case

Offer valid 14th-27th June 2003

- Mobile Intel® Pentium® 4 Processor 2.0GHz - M featuring Intel® SpeedStep® technology
- 256MB DDR SDRAM
- 30GB¹ Hard Drive
- 64MB DDR nVidia® GeForce™ 4 4200 Go AGP 4X Graphics • 24X Max CD-RW/DVD³ Combo Drive
- 15.4" Wide-Aspect UltraSharp™ WSXGA+ LCD (1680x1050 res) • 56K Modem
- Microsoft® Windows® XP Home Edition

\$3,199*

By delivery only, standard fee \$99* Prices include GST.
Offer valid 14th-27th June 2003.
E•VALUE CODE J540609 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to 384MB SDRAM for \$99*
- ▶ Upgrade to 3-Year Limited Next Business Day On-Site² Service (excluding software) for \$369*
- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*

Inspiron 500m From 2.3kg, 39mm thin

Free Leather Carry Case

Offer valid 14th-27th June 2003

- Intel® Centrino® Mobile Technology • Intel® Pentium® M Processor 1.6GHz • Intel® 855PM chipset • Intel PRO/Wireless 2100 Network Connection 802.11b • 256MB Shared DDR SDRAM (up to 64MB of system memory may be allocated to support system graphics)
- 30GB¹ Hard Drive • 24X Max CD-RW/DVD³ Combo Drive
- 14.1" XGA Display (1024x768 res) • 56K Modem
- Microsoft® Windows® XP Home Edition

\$3,699*

By delivery only, standard fee \$99* Prices include GST.
Offer valid 14th-27th June 2003.
E•VALUE CODE J540608 - PCU

UPGRADE YOUR DELL

- ▶ Upgrade to Microsoft® Office XP Small Business for \$369*
- ▶ Upgrade to 60GB¹ Hard Drive for \$199*
- ▶ Add a TrueMobile™ 1180 WLAN MiniPCI Card for \$99*

Axim™ X5

The Axim X5 allows you to connect and synchronise your files from your notebook or desktop keeping you organised and productive on the go.

- Intel® X-Scale™ Processor at 300MHz
- Microsoft® Pocket PC 2002 Premium
- Brilliant 3.5" Colour Transflective LCD (240x320 res) • 32MB SDRAM • USB Cable
- 32MB Intel® StrataFlash® ROM
- Integrated CompactFlash® Type II and
- Secure Digital / Multi Media Card Slots
- Removable / Rechargeable Battery

See a 3D tour of the Axim at
www.dell.com.au/axim

\$499*
ONLY

By delivery only, standard fee \$64*.

UPGRADE YOUR DELL

- ▶ Add a Leather Carry Case for \$62*
- ▶ Upgrade to 64MB ScanDisk Secure Digital Memory Card for \$82*



All featured systems come standard with: 1-Year Limited Next Business Day On-site Service² (excludes software and Axim), WordPerfect® Productivity Pack and 3 months' free⁴ AOL membership for new members (Conditions apply⁴. Modem required for AOL access.) Desktops come with Norton Anti-Virus 2003 – OEM Version.

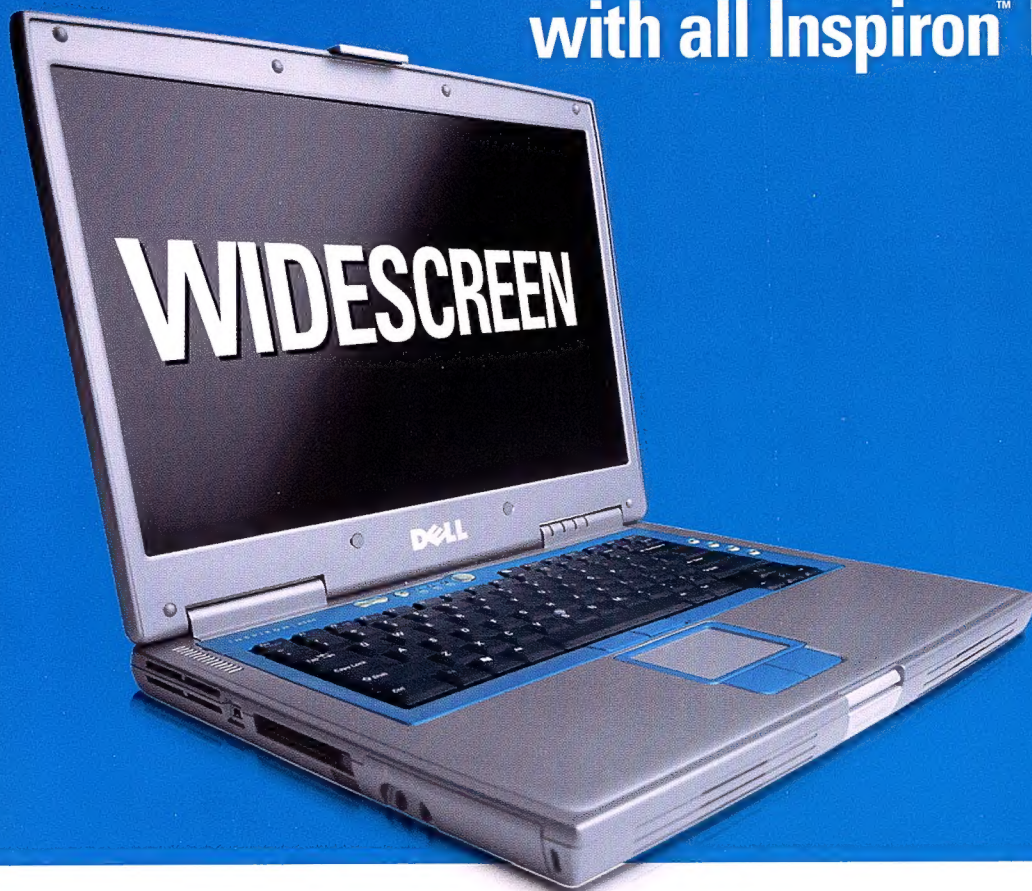


MOBILE
TECHNOLOGY

***DELL'S NORMAL TERMS AND CONDITIONS APPLY AND ARE AVAILABLE AT www.dell.com.au OR ON REQUEST.** All prices shown are inclusive of GST. X5 is \$64 (inc. GST) per system applies to all orders unless otherwise stated. All efforts will be made to check for errors in typography and photography; however, Dell, Inspiron, Axim, TrueMobile and Value are registered trademarks or trademarks of the Dell Computer Corporation. Microsoft, Pocket PC 2002 and Windows are either registered trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Other trademarks and trade names of others. **1. For hard drives,** GB means 1 billion bytes. Accessible capacity varies depending on operating environment. **2. On-site service** and/or next business day service is available to persons who are AOL Members as at 14 December 2002. Offer does not include telecommunications charges. You must be 18 years or older, and the service is available only from the date of registration (maximum 92 days). At the end of the three free months you will automatically be migrated to AOL's VALUE Plan (VALUE Plan charges) at which point your monthly membership fee will commence being charged to your credit card. If you do not wish to continue your membership, you must notify Dell Computer Pty Ltd (ACN 003 855 561) Building 3, 14 Aquatic Drive, Frenchs Forest NSW 2086. (No showroom on-site.)

Free Leather Carry Case

with all Inspiron™ Notebooks



**Click
or
Call**

for our latest pricing
and promotions

Featuring the latest technology, the high performance Inspiron 8500 comes with a 15.4" Wide-Aspect, UltraSharp™ screen (1920x1200 res) and a powerful Mobile Intel® Pentium® 4 Processor 2.4 GHz - M supporting Enhanced Intel® SpeedStep® technology. Plus for a limited time get a free leather case on all featured Inspiron notebooks.

Consumer and Business Finance available

Ask about our financing options.

Inspiron 8500 From 3.1kg, 38mm thin

Free Leather Carry Case

Offer valid 14th-27th June 2003

- Mobile Intel® Pentium® 4 Processor 2.4GHz - M supporting Enhanced Intel® SpeedStep® technology • 512MB DDR SDRAM • 60GB* Hard Drive
- 64MB DDR nVidia® GeForce™ 4 4200 Go AGP 4X Graphics • 24X Max CD-RW/DVD³ Combo Drive • 15.4" Wide-Aspect UltraSharp™ WUXGA LCD (1920x1200 res)
- 56K Modem • WordPerfect® Productivity Pack • Microsoft® Windows® XP Home Edition

\$3,999*

By delivery only. Standard fee \$99*. Prices include GST.
Offer valid 14th - 27th June 2003. E•VALUE CODE J540611 - PCU

UPGRADE YOUR DELL™

- ▶ Upgrade from WordPerfect® Productivity Pack to Microsoft® Office XP Small Business (includes Word, Excel, Outlook and Publisher) for \$369*
- ▶ Add a Second Battery for \$174*

Dell™ recommends Microsoft® Windows® XP Professional for Mobile Computing



Easy to buy. Easy to own. Easy as

DELL

Visit www.dell.com.au or call **1300 303 192**

Mon to Fri 8am-8pm, Sat 9am-3pm, Sun 10am-4pm (EST)

Get a Free Upgrade

on all featured Dimension™ Desktops

**Click
& Save**

when you buy online @
www.dell.com.au



The New Dimension 4600 features an Intel® Pentium® 4 Processor, 17" CRT Monitor (16.0" v.i.s.) and from the 14th - 27th June it comes with a free upgrade to a DVD[±] + RW Combo Drive. Now that's outstanding value at only \$1,899* (by delivery only. Standard fee \$99*).

NEW Dimension 4600

Free Upgrade to DVD[±]+RW Combo Drive

Offer valid 14th-27th June 2003

- Intel® Pentium® 4 Processor 2.66GHz • 256MB DDR SDRAM
- 60GB¹ Hard Drive • 64MB nVidia® GeForce™4 MX 420 Graphics Card
- SoundBlaster® Live!™ 5.1 Sound Card • **NOW** 16X Max DVD[±] + RW Combo Drive
- 17" CRT Monitor (16.0" v.i.s.) • 56K Modem • Stereo Speakers
- WordPerfect® Productivity Pack • Microsoft® Windows® XP Home Edition

\$1,899*

By delivery only. Standard fee \$99*. Prices include GST.

Offer valid 14th - 27th June 2003. E-VALUE CODE J210613 - PCU

UPGRADE YOUR DELL™

- ▶ Upgrade to 80GB¹ Hard Drive for \$50*
- ▶ Upgrade to 128MB ATI Radeon™ 9800 TX Graphics Card for \$199*
- ▶ Upgrade from WordPerfect® Productivity Pack to Microsoft® Office XP Small Business (includes Word, Excel, Outlook and Publisher) for \$369*

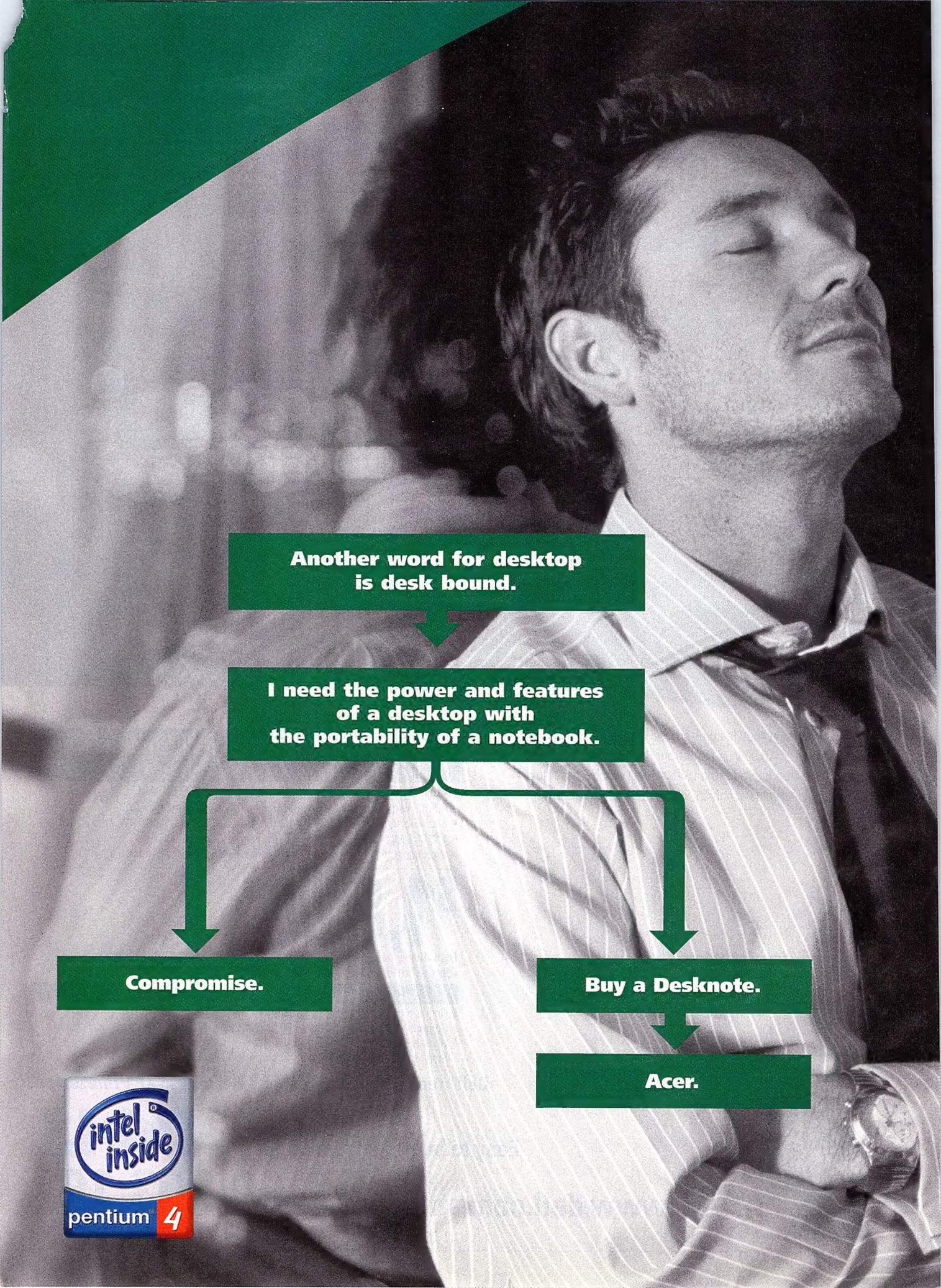
Dell™ recommends Microsoft® Windows® XP Professional



Easy to buy. Easy to own. **Easy as DELL™**

Visit www.dell.com.au or call **1300 303 192**

Mon to Fri 8am-8pm, Sat 9am-3pm, Sun 10am-4pm (EST)



**Another word for desktop
is desk bound.**

**I need the power and features
of a desktop with
the portability of a notebook.**

Compromise.

Buy a Desknote.

Acer.



Breakthrough 17" LCD Screen Desknote

Ever dreamed of a PC that combines a large monitor and the performance of a desktop PC with the portability of a notebook PC? The Aspire 1700 desknote PC from Acer does just that. Features include

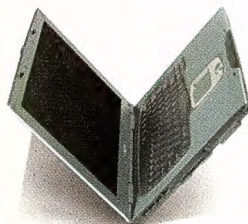


Aspire 1703SC Desknote

- Intel® Pentium® 4 Processor 2.66GHz • Large, bright 17" active colour screen
- 256MB DDR SDRAM • 80GB 5400rpm hard disk drive • 8 x DVD + 24 x 10 x 8 x CD-RW combo • Internal 56K modem + broadband ready 10/100 LAN • Full size keyboard • Stereo speakers with subwoofer • Microsoft® Windows® XP Home • Battery not included

\$2,999

RRP inc GST from \$25.04 per week* Please quote e-Code AA1700



- Bonus carry case & 32MB USB handydrive†
- 3 month unlimited broadband wireless access to SkyNetGlobal® in Australia†

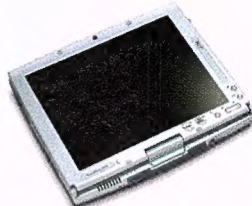
TravelMate 800XCI

- Intel® Centrino™ mobile technology • Intel® Pentium® M processor 1.3GHz • Intel® 855PM Chipset • Intel® PRO/Wireless Network Connection 802.11b^{^^} • 14.1" active colour screen • 256MB DDR SDRAM • 40GB hard disk drive • 8 x DVD + 24 x 10 x 8 x CD-RW • Firewire • Integrated Smart Card security • Internal 56k modem + 10/100 LAN - Broadband internet ready • 4-in-1 multi memory card reader • Microsoft® Windows® XP Professional • 2 Hour Commitment Warranty Express Service**

\$3,999

RRP inc GST from \$33.39 per week* Please quote e-Code TMC800

the luxury of a bright 17 inch LCD screen, enormous 80GB of hard drive, and an Intel® Pentium® 4 Processor for power equal to high performance desktops. At only \$2,999, it's truly in a class of its own.



- Tablet PC for convenient handwritten data entry
- 3 month unlimited broadband wireless access to SkyNetGlobal® in Australia†

TravelMate C110TCi Tablet PC

- Intel® Centrino™ mobile technology • Intel® Pentium® M processor 900MHz • Intel® 855GM Chipset • Intel® PRO/Wireless Network Connection 802.11b • 10.4" active colour rotatable screen • 512MB DDR SDRAM • 40GB hard disk drive • External 8 x DVD + 24 x 10 x 8 x CD-RW combo • 2 Li-ion batteries • Internal 56K modem + 10/100 LAN - Broadband internet ready • Microsoft® Windows® XP Tablet PC Edition • 2 Hour Commitment Warranty Express Service**

\$4,499

RRP inc GST from \$37.56 per week* Please quote e-Code TMC113



- Large 15" LCD screen
- Bonus carry case & 32MB USB handydrive†
- 3 month unlimited broadband wireless access to SkyNetGlobal® in Australia†

TravelMate 803LCi

- Intel® Centrino™ mobile technology • Intel® Pentium® M processor 1.6GHz • Intel® 855PM Chipset • Intel® PRO/Wireless Network Connection 802.11b^{^^} • 15" active colour screen • 512MB DDR SDRAM • 60 GB 5400 RPM hard disk drive • 8 x DVD + 24 x 10 x 8 x CD-RW combo • Firewire & S-video • USB 2.0 • Integrated Smart Card security • Internal 56k modem + 10/100 LAN - Broadband internet ready • 4-in-1 multi memory card reader • Microsoft® Windows® XP Professional • 2 Hour Commitment Warranty Express Service**

\$5,799

RRP inc GST from \$43.50 per week* Please quote e-Code TMC801

Acer recommends Microsoft® Windows® XP Professional for Mobile Computing.

shopAcer

www.acer.com.au

1300 366 567

Authorised Dealers

Intel, the Intel Inside Logo, Intel Centrino and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. ©2003 Acer, Inc. All rights reserved. Acer and the Acer logo are registered trademarks and TravelMate and Aspire are trademarks of Acer Inc. Product specifications and recommended retail prices are subject to change without prior notice. All other products, brand names, company names and logos are trademarks of their respective companies. Pictures are for illustrative purposes only.

^{^^}Wireless connectivity and some features may require you to purchase additional software, services or external hardware. Availability of public wireless LAN access points limited. As measured by MobileMark 2002. System performance, battery life, wireless performance and functionality will vary depending on your specific hardware and software configurations. **Terms and conditions apply - warranty locations also available on website. See www.acer.com.au for full details. ††Gartner Dataquest Quarterly Statistics Program March 2003. †Valid until 9 July 2003 or while stocks last. *Rental amounts shown are indicative and based upon a 36-month rental contract and rates at time of publication; all state and federal government charges (Stamp Duty & GST) included. Rental figures quoted are for business use only and require a minimum purchase of \$2000 ex GST. All rentals are subject to credit approval. Provided by Acer Finance Australia Pty Ltd. Individual dealers may offer alternative financing options.

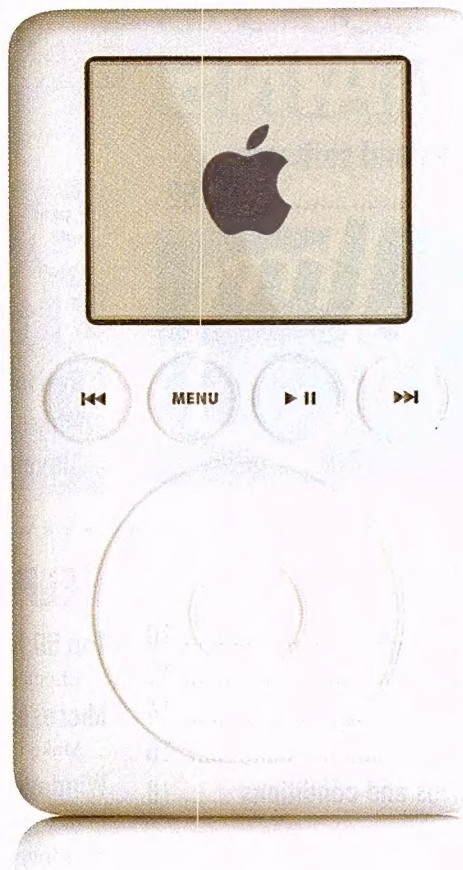
W5 Group ACE198/PCU

acer

Empowering People



7,500 songs in your pocket.



The new iPod.

Carry your entire music collection in your pocket. The new iPod features an astonishing 7,500-song capacity,[†] backlit touch buttons, and a dock for one-step FireWire® or USB 2.0 synchronization with a Mac® or PC. All tucked into a package that's thinner and lighter than the original.

www.apple.com.au/ipod/

iPod is for authorised use only. Don't steal music. [†]30GB model only. Based on 4 min./song/128kpbs AAC or MP3 encoding. TM and ©2003 Apple Computer, Inc. All rights reserved. Call 133 MAC (622). WLTBWA KAPB5747

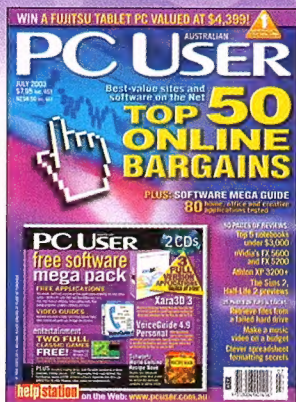


Image: Getty Images
Design: David Collins

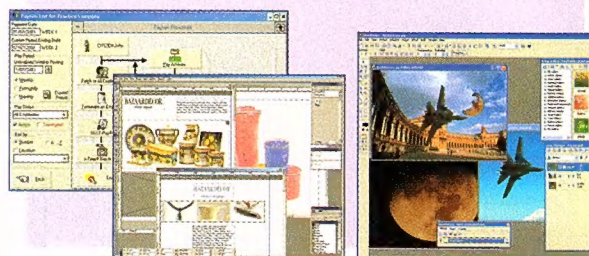
TOP 50 ONLINE BARGAINS

Best-value sites and software
on the Net 62



SOFTWARE MEGA GUIDE

80 home, office and creative
applications tested 40



50 PAGES OF TIPS & TRICKS

Retrieve files from a failed hard drive..... 78
Make a music video on a budget 84
Clever spreadsheet formatting secrets.... 70

contents

LOG IN

CD contents	10
Editorial	12
Warp speed	14
Readers' letters	16
Privacy notice/terms and conditions	18

TEST BENCH

Hardware reviews	22
Iwill XP4 Mini PC System, Soltek Qbic EQ3000W, Maxtor Atlas 15K 73GB, Sony CLIE PEG-TG50, Creative Sound Blaster Digital Music, FC-4S3 Multi Adapter Panel, DrayTek Vigor2600We ADSL Modem/Router, Billion BIPAC-741 GE ADSL Firewall Router, Sitecom Multiplayer Gamers Networking.	
Top five notebooks	28
This month, we test notebooks under \$3,000.	
Top Buys	32
Our favourite hardware and software.	
Upgrade report	34
We test new graphics cards and motherboards.	

FEATURES

Software Mega Guide	40
This month, we review over 80 home, office and creative applications.	

HELP STATION

Top 50 bargains online	62
Check out our favourite online bargains.	
Microsoft Office	70
Make the most of Excel's conditional formatting.	
Windows 98/Me	73
Learn more about the Windows clipboard.	
Windows XP	76
Customise your Windows XP logon.	
Hardware	78
Recover data from a failed hard drive.	
Linux	80
Setting permissions in Linux systems.	
Networking	82
A more in-depth look at mapping network drives.	
Video and sound	84
Make a music video clip.	
Web authoring	86
Add forms to your Web site.	
Windows 2000/XP Pro	88
Change file attributes using Command Prompt.	
CD tutorial	89
Get up and running with Xara3D.	
Help Station Q&A	90
Answers to all your technical questions.	

50 PAGES OF REVIEWS

Top five notebooks under \$3,000	28
nVidia's FX 5600 and FX 5200	34
Athlon XP 3200+	36
Half-Life 2, The Sims 2 previews	117



ENTERPRISE

A solution for every business 102

We review software packages to help you run your small business.

AFTER HOURS

Nokia N-Gages E3 116

Nokia's new console was just one of the amazing sights at this year's E3 games convention.

Game reviews 120

Hot new games releases tested.

Kids' software 126

We review top new titles for children.

Techware 130

We look at the latest in cool tech gadgets.

SHOP WISE

Shopping tips 132

HARDWARE

ABIT IC7-G	38
ABIT Siluro FX5800 DOTH	34
Acer TravelMate 284XC	29
Albatron Gigi FX5200P	35
Albatron PX865PE Pro II	38
Billion BIPAC-741 GE ADSL Firewall Router	26
Creative Sound Blaster Digital Music	24
Dell Inspiron 500m	28
DrayTek Vigor2600We ADSL Modem/Router	26
FC-4S3 Multi Adapter Panel	24
Hercules 3D Prophet 9800 Pro	34
Hi-Grade Notino W6700	28
IBM ThinkPad R40	29
iRemote	130
llwill XP4 Mini PC System	22
Maxtor Atlas 15K 73GB	22
MSI FX5600 and FX5200	35
Mustek DV3000	130
Pioneer Soho D400S	29
PowerColor Radeon 9800 Pro	35
Sitecom Multiplayer Gamers Networking	26
Soitek Qbic EQ3000W	22
Sony CLIE PEG-TG50	24
Sony MPD-AP20U	130
Sparkle SP8831	35

SOFTWARE

123-Project	111
1503 A.D.: The New World	123
ACCPAC Simply Accounting 2003	104
ACT! 6.0	110
Adobe After Effects 5.5	58
Adobe GoLive 6	54
Adobe Illustrator 10	52
Adobe InDesign 2.0	50
Adobe LiveMotion 2	56
Adobe PageMaker 7.0	50
Adobe Photoshop 7	48
Adobe Premiere 6.5	58
Bananas in Pyjamas: It's Party Time	127
Boris RED 2.5	58
Borland JBuilder Standard	57
Corel Painter 8	48
Corel Presentations	43
Corel Ventura 10	50
Corel WordPerfect Office 11	42
CorelDRAW Graphics Suite 11	52
Cossacks: Back to War	122
Devastation	121
Dragon NaturallySpeaking 7 Preferred	112
Enter the Matrix	120
Eudora 5.2	45
Express Plus 1.05	45
ezimercant Pro 3.5	112
FileMaker Pro 6	46
GoldMine Business Contact Manager 6.0	110
Hi-5 Fun Club	126
Illuminatus Opus Pro	53
Internet Explorer 6	47
ISYS:desktop	114
Jasc Paint Shop Pro 8	49
Journyx Timesheet 5.0	113
Logisoft e-PayDay 9	108
Lotus Approach 9.5	46
Lotus Freelance	43
Lotus Organizer 6	45
Lotus SmartSuite Millennium Edition 9.7	42
Macromedia Director MX	53
Macromedia Dreamweaver MX	54
Macromedia Fireworks MX	49
Macromedia Flash MX	56
Macromedia FreeHand MX	52
MAUS KPI Scorecard Professional Edition	113
Metal Gear Solid 2: Substance	124
Microsoft Access 2002	46
Microsoft FrontPage 2002	55
Microsoft Money 2003 Standard	106
Microsoft Office XP	41
Microsoft Outlook 2002	44
Microsoft Outlook Express 6	45
Microsoft PowerPoint 2002	43
Microsoft Project 2002	111
Microsoft Publisher 2002	51
Microsoft Visio 2000 Standard	114
Microsoft Visual Studio .NET Professional	57
Microsoft Works Suite 2003	42
Mozilla 1.3	47
MYOB Accounting Plus 13 and Premier 7	103
MYOB BusinessBasics	104
MYOB PowerPay 6	108
MYOB RetailManager Standard 6.5	109
Nero Burning ROM 5.5 Pro	61
NetObjects Fusion 7	55
NTI CD-Maker Platinum 6	61
OmniPage Pro 12 Office	112
Open Wide, Come Inside — It's Play School	128
OpenOffice.org	42
Opera 7.1	47
Pastel Xpress and Accounting 6	104
Pinnacle Edition 4.5	58
Pinnacle Expression	60
Primal	124
Quark XPress 5.01	51
Quicken CashBook 2003	104
Quicken Payroll Premier 2002	108
Quicken Personal 2002 SE	106
Quicken QuickBooks 2003	103
Quicken QuickPOS Retailer 5	109
Quicken ShareAnalyser	106
Roxio Easy CD & DVD Creator 6	61
Sonic Foundry Vegas Video 4	58
Sonic Foundry VideoFactory 2.0	58
Sonic MyDVD Video Suite 4	60
Sun StarOffice 6.0	42
SWISH 2.0	56
The Hooley Dooleys: Oopsadazee	128
The Wiggles: Wiggle Bay	126
Time & Chaos 5.6	45
Ulead DVD MovieFactory 2	60
Ulead DVD Workshop 1.3 AC-3	60
Ulead MediaStudio Pro 7	58
Ulead PhotoImpact 8	49
Ulead VideoStudio 7	58
VCOM Web Easy Professional	55
V-Rally 3	125
War of the Monsters	123
Xara X	52
X-Men 2: Wolverine's Revenge	122



SUBSCRIBE

FOR YOUR CHANCE TO WIN A

**FUJITSU STYLISTIC
ST 4110 TABLET PC**

VALUED AT
\$4,399

DETAILS PAGE 96



Photographic quality for business or pleasure

Borderless photo prints

Up to 22ppm print performance

Exif Print software for professional results

4800 x 1200 dpi print quality

Microscopic ink droplets eliminate graininess

Money saving individual ink tanks

canon.com.au

1800 021 167

i850 bubble jet printer



Canon
advanced simplicity



SOFTWARE MEGA PACK

This month, you'll find a variety of free applications in our Free Software Mega Pack, including office suites, finance software, video editing tools, Web design programs, graphics software and more.

EXCLUSIVE TUTORIAL SERIES

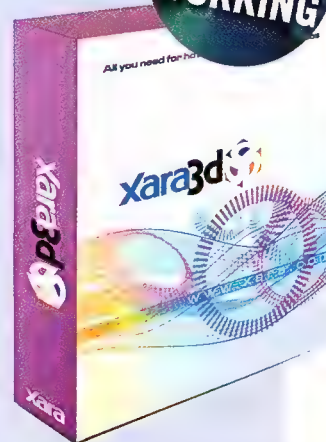
This month's CDs include the latest instalments of two complete training courses from VTC: Network Plus Certification, and Macromedia Flash 4. You can purchase any of VTC's 140 other training courses at the special price of \$134.95. Visit www.vtc.com to see more of the company's range, or call (07) 3367 8451 for assistance. Please mention this exclusive PC User offer to receive your discount on any VTC training CD.

VTC

XARA3D 3

Create 3D titles, animations and headings for the Web with the free full version of Xara3D 3, as sold for \$70! Xara3D is designed specifically for creating high-quality, yet compact, 3D text headings, either still or animated, for use on the Web. You can also upgrade to Xara3D 5 at 25% off the normal retail price by registering your copy of Xara3D 3 first. But hurry, this special offer lasts only until September 15, 2003.

FULLY WORKING



DISC 1

RESOURCE KIT

FULLY WORKING VERSIONS

- Xara3D 3
- VoiceGuide 4.9 Personal
- Schwartz World Cuisine Recipe Book

FREE SOFTWARE MEGA PACK

OFFICE SUITES

- 602Pro PC Suite 2001
- OpenOffice.org 1.0.3 for Windows

FINANCE

- Australian Taxation Office's E-Record application 2.0.2

DATABASES

- MySQL 4 Database Server for Windows (Open Source)
- TreePad 2.6.9

GRAPHICS AND VIDEO

- The Gimp 1.2.4
- Oriens Enhancer GOLD 2.6
- Zwei-Stein Video Editor

AUDIO

- Audacity 1.0
- Ots Labs CD Scratch 1200 1.00

WEB DESIGN

- CityDesk Starter Edition 1.0.31
- Webmaster 3.0

BROWSERS AND EMAIL

- Crazy Browser 1.05
- Eudora 5.2.1
- Microsoft Internet Explorer 6 with Service Pack 1
- Mozilla (32-bit) 1.3.1
- Netscape 7.02
- Opera 7.11 bundled with Java Runtime Environment
- Pegasus Mail 4.11

SOFTWARE

ANTIVIRUS SOFTWARE

- Kaspersky Anti-Virus Lite
- NOD32

BROWSERS

- Microsoft Internet Explorer 6 with Service Pack 1
- Mozilla (32-bit) 1.3
- Netscape 7.02
- Opera 7.10 bundled with Java Runtime Environment

ONLINE TOOLS

- AccountLogon 2.5
- Chat-N-Tickle 5.6
- Easy AuctionTools 4.0
- Emerald PopStop 1.2
- Free Lyrics Finder 1.4
- iOpus Internet Macros 3.71
- PeopleOnPage (POP) 1.1
- Token2 Plus 3.6.1

SYSTEM UTILITIES

- 7Tools Partition Manager 2003 5.7.2
- Buzzsaw On-The-Fly Defragmentation 1.0
- Desktop Rover 2.0
- DirectX 9.0a
- SoundJudgment 2.11
- UltraISO 5.55 SR-2
- WinGuides Registry Mechanic 1.0
- WinZip 8.1 Service Release 1

HANDHELDS

- Airscanner Mobile Sniffer 1.0
- Beyond Contacts 3.0
- IE2PDB Explorer Bar 1.2
- Japan2Go Talking Phrase Book 3.0
- Strategic Commander 1.2
- Surveyor's Assistant 3.0
- Voice LookUp 3.3
- WeddingMgr+ 1.0

TUTORIALS

VTC TRAINING

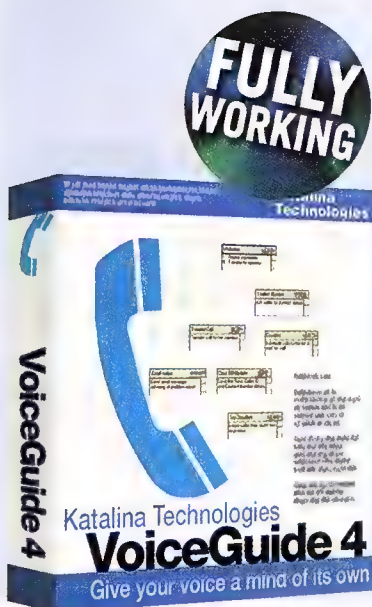
- Macromedia Flash 4
- Network Plus Certification

VIDEO TUTORIAL

- Retrieving data from a faulty hard disk drive
- Backing up your important files

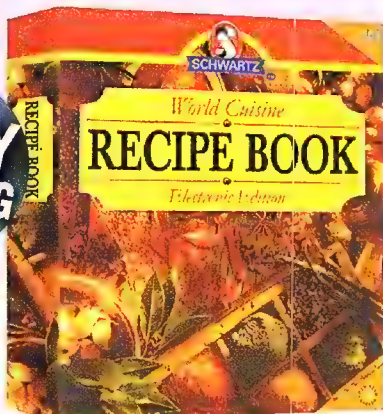
FULLY
WORKINGVOICEGUIDE 4.9
PERSONAL

With a PC and a voice-capable modem, you can now hook your phone into an Interactive Voice Response system. Katalina Technologies is offering *PC User* readers the current version of VoiceGuide Personal 4.9 for free this month, as sold for \$99! But hurry, the offer for free online registration expires at the end of October, 2003.



SCHWARTZ WORLD CUISINE RECIPE BOOK

If you enjoy cooking and experimenting with new dishes, then this is a great program for you. This month, *PC User* readers can create all sorts of exotic treats, thanks to this exciting electronic cookbook from QV Software, valued at \$19.95. The program includes over 200 mouthwatering recipes from around the world.

FULLY
WORKING

- Creating a full backup using Second Copy 2000

MACROMEDIA TIPS

- Director MX
- Dreamweaver MX
- Fireworks MX
- Flash MX

DISC 2

ENTERTAINMENT

GAME DEMOS

- Rise of Nations
- Star Trek Elite Force II (single player)
- Unreal II: The Awakening
- Vietcong (single player)

CLASSIC GAMES

- Monopoly 1.0
- Mr. Boom 3.0

GAME TRAILERS

- Mythica
- Half-Life 2

MAG STUFF

HELP STATION: Q&A

- WINX32 5.0

MICROSOFT OFFICE:

MACROS OF THE MONTH

- Comment to your text

- Converts dollar amount in numbers to words

WINDOWS 98/ME

- Clipboard Buddy 1.0.4
- Clipboard Express Standard 2.5
- Clipboard Express Pro 2.7
- Clipboard Magic 3.00
- ClipMate 6.1.02
- Clipomatic 2.01
- SmartBoard XP 3.11

WINDOWS 2000/XP PRO

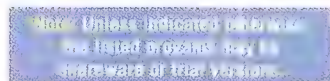
- Open Command Window Here for Windows XP
- Command Prompt Here 1.1 for Windows 95/NT 4.0/2000

LINUX

- Ogle DVD Player

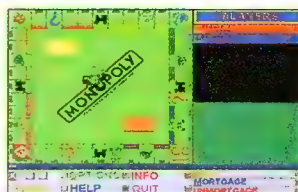
PROGRAMMING

- Game Maker 5.0



GAME TRAILERS

This month, we've included trailers for Mythica and Half-Life 2.



CLASSIC GAMES

Monopoly and Mr. Boom are sure to bring you hours of enjoyment.

USING THE CDS

STARTUP

The CDs use a Web-style interface. You only need to install a Web browser to be able to view the contents. If you already have a browser installed, then the CD will autorun (for Win 95/98) and load your default browser at the home page of the CD. If the CDs do not autorun, simply launch your favourite browser and open the page DEFAULT.HTM from the root of the CD. If you don't have a Web browser installed, you can install one from the CD. See the CD case for details.

SYSTEM REQUIREMENTS

The *PC User* discs can be used with any PC that reads DOS-based CD-ROMs. However, we recommend use with Microsoft Internet Explorer 4 or later for Windows, which requires at least a 486 with 8M of RAM. The

third-party software on the CDs will often have higher system requirements.

BEFORE USING THE CDS

We've provided installation instructions on the CD back cover, including what to do if you have problems. Please read these carefully before using our cover discs. Also, click on 'Terms of use' on the default page of either disc and read the terms and conditions of use before use. If you agree with the terms, you may continue to use the CD, and this use will constitute your acceptance of the conditions stated. If you do not agree with all of the terms, you may not continue to use the CD and you should return the CD and magazine to us for a refund. We also recommend that you read our Help file, which is available from the default page.



Don't just follow the pack

Consider all the options when buying software, not just the obvious ones, says **Glenn Rees**.

When planning this year's software mega guide, it occurred to me how just about every software category is now dominated by one program, or perhaps two at most.

When we're choosing a word processor, spreadsheet, presentation program and other office applications, the vast majority of us automatically think Microsoft Office. Those people into image editing and Web development mostly go for Adobe Photoshop and Macromedia Dreamweaver, respectively.

Why has this happened? After all, when shopping for just about any other item — a PC, printer, television, car and so on — there are usually several

strong brands to choose from. Why is software different? Is it a case of the cream rising to the top? Or does it reflect how most software markets have become dominated by a handful of large companies with large marketing budgets?

My answers to these last two questions would be yes (in many cases), and yes (in most cases). There's no question that the likes of Microsoft, Adobe and Macromedia generally make excellent software — anyone who says otherwise is simply biased. But they also have deep pockets to market and promote their software better than their competitors.

However, that doesn't mean that we should all blindly follow the pack and only buy the software from these large companies. There are two reasons why you should consider alternatives. First, there are usually some excellent, and often better-value alternatives

in most software categories, and second and most importantly, we all have different needs for our software.

Take image editing as an example. While we recommend Photoshop for most professionals and many serious enthusiasts, it's expensive and its learning curve is steep. If all you want to do is touch up digital photos, then a tool like Ulead Photo Express 4 is probably a better choice. For those who want much of Photoshop's power without the price, then Jasc Paint Shop Pro is a popular choice, while professional Web developers who use Dreamweaver might be better off with Macromedia's Fireworks for their image editing.

With this in mind, I have two pieces of advice for those in the market for software: shop around with an open mind; and carefully consider your needs before making your choice. You may still end up choosing the likes of Microsoft Office, but at least you've made the choice for the right reason.

This year's Software Mega Guide (starting on page 40) has been designed to help you in this process. With each software category, we've looked at the market leader and examined why that program dominates the market. Then we reveal when you should stick with the market leader and when you should consider something different, and we look at some of the alternatives. It's impossible to cover every program in every category, but it is very comprehensive and, most importantly, gives you a valuable starting point for making your decision. **PCU**

NEXT MONTH

Digital video might be the next big thing, but many of us still use our CD burners mostly for creating audio discs. So, we will provide a comprehensive guide to CD burning in the August edition of *PC User*. We'll review the latest CD burning software, plus specialised software for ripping audio files and mastering audio CDs. Then we explain how to do it all yourself, from recording from an analog source to choosing the right audio format and mastering the CD. Want to make your own music? We review all the software you need and the latest music keyboards that you can connect to your PC. That's as well as all our regular Help Station tutorials, upgrade report, reviews of PC and home entertainment products, plus more goodies in our regular two-CD pack.

HOW TO CONTACT US

Subscriptions and back issues: Phone 13 61 16 (Monday to Friday 8am to 8pm, Saturday 8am to 6pm). Email: magshop@acp.com.au. Web: www.magshop.com.au.
CD support: Email: pcusercd@acp.com.au. See full technical support details on the CD back cover.
Reprints and copyright: Helen Duncan (02) 9288 9105.
Other editorial and marketing enquiries: Phone: (02) 9288 9105. Fax: (02) 9267 4909. Email: pcuser@acp.com.au.
Advertising enquiries, NSW: Simon Smith (02) 9288 9107.

Email: spsmith@acp.com.au. **Victoria:** Sumit Roy (02) 9288 9143. **Queensland:** Noel Fitzpatrick (07) 3000 8500. **South Australia/Western Australia:** Arnoul Media Services (08) 8361 9999. **Shop Wise/Classifieds:** Jules Flakelar (02) 9288 9158. **Material:** Susan Harrison (02) 9282 8688.
Postal address: PC User, GPO Box 4088, Sydney NSW 1028.
Street address: Level 9, Stockland House, 175-183 Castlereagh Street, Sydney NSW 2000.
Courier dock: 197 Elizabeth Street, Sydney NSW 2000.
Web: www.pcuser.com.au

PC USER

Editor

Glenn Rees

Deputy Editor

Anna Raciti

Chief Sub-Editor/Journalist

Gail Lipscombe

Journalist/Sub-Editor

Olga Jevdic

Art Director

David Collins

Graphic Designer

Elinor McDonald

Testbench Editor

Joshua Rodriguez

Assistant Brand Manager

Helen Duncan

Contributing Editors

John Hilvert, Darren Yates

Contributing Writers

Les Bell, Kurt Best,

Helen Bradley, Caroline Fox,

Link Harris, John Hepworth,

Angus Kidman, Philip Moore,

Julian Schoffel, Rose Vines,

Jan Wikström, Paul Zucker

Web & Database Manager

Dan Lowden

Multimedia Production Editor

Nola Camden

PC User CD Co-ordinator

Laurence Kwek

CD/Web Co-ordinators

Laura Kane, Lachlan Grant

National Advertising Manager

Simon Smith

Sales Manager

Cameron Curtis

Advertising

Jodie Etchells, Jules Flakelar,

Laura Wood, Sumit Roy

CEO

John Alexander

Group Publisher

Jill Baker

Senior Brand Manager

Mark Harrison

Advertising Director

Andrew Cook

Production Controller

Joseph Kenworthy

Advertising Production

Susan Harrison

Australian PC User is printed every month by ACP Tech, a division of ACP Publishing Pty Limited ACN 053 273 546.

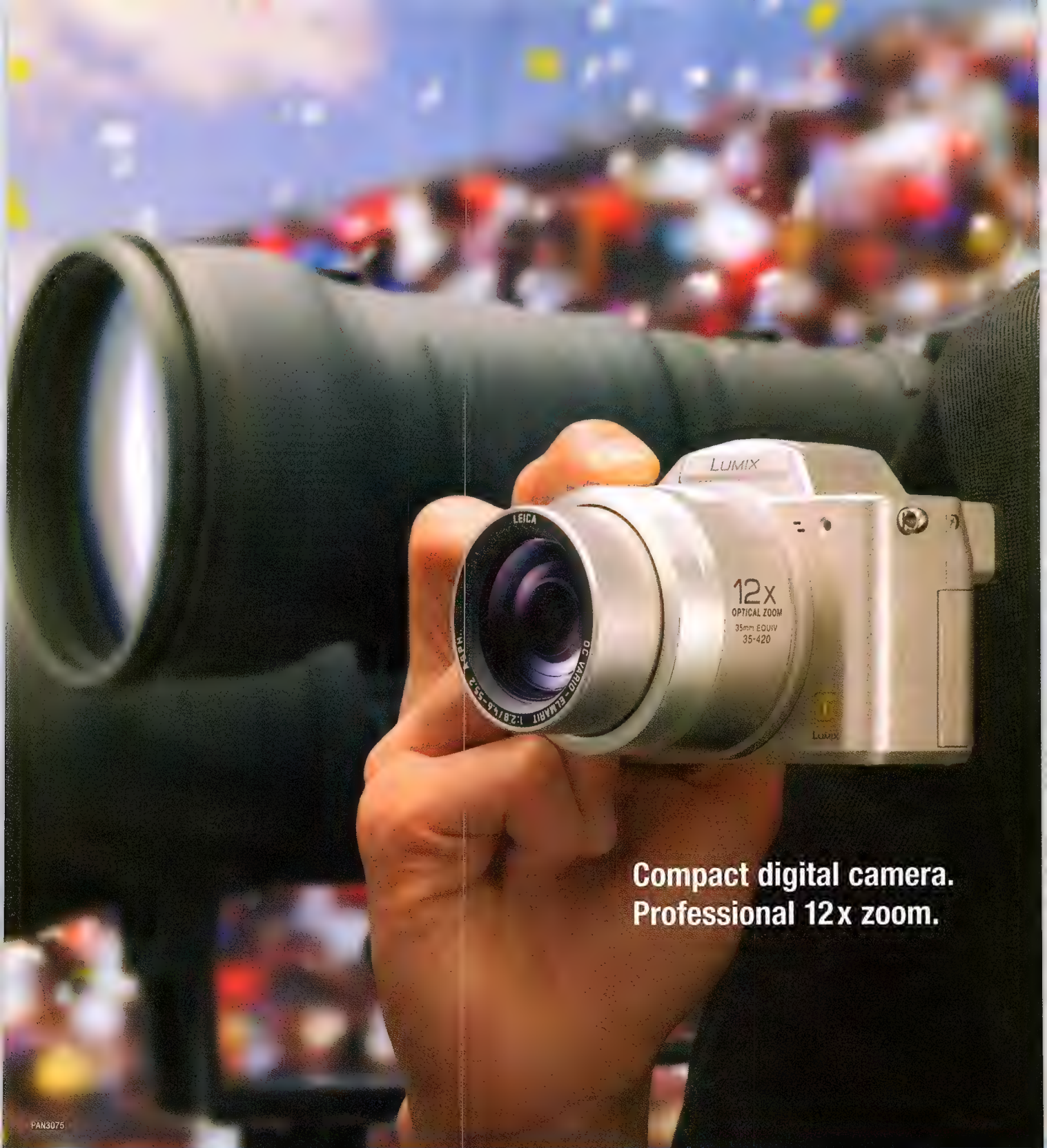
Printed by Hannanprint Pty Ltd, 55 Doody Street, Alexandria.

Distributed by Network Distribution Company, 54 Park Street, Sydney NSW 1028. Material contained within

Australian PC User is protected under the Commonwealth Copyright Act 1968.

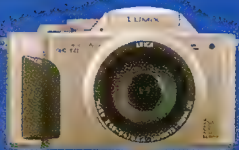
No material may be reproduced in part or in whole without written consent from the copyright holders.

All rights reserved. Subscription rates (surface mail in Australia): one year (12 issues) \$70, two years (24 issues) \$130. See page 96 for details.



**Compact digital camera.
Professional 12x zoom.**

PAN3075



DMC-FZ1
Also available in black

How do you enjoy all the benefits of a 420mm lens in a compact camera? You get your hands on the Panasonic DMC-FZ1 Lumix Digital Camera. It utilises a world-class Leica lens to deliver a massive 12x optical zoom – the biggest in the market. Combine this with an optical image stabiliser and mega burst shooting, and you've got one of the most versatile cameras on the planet. To find out more, visit your local retailer or go to www.panasonic.com.au

Panasonic expect more



Spam email is costing Australia jobs and millions of dollars every year in lost productivity. It's time to fix it, says Darren Yates.

Spam: the scourge of the Internet

Back when I was as a kid, SPAM was simply a spiced ham meat I was fond of in my sandwiches at school. Today, it's the scourge of the digital age, yet both consumers and corporates are dining on it for breakfast, lunch and tea. If I leave my inbox untouched for just a day, I have around 80 emails waiting for download — and half of that is pure spam mail.

Most spam emails flying around now seem to be either porn or porn-related, or for human growth hormone supplements. And if that's not bad enough, there are the emails offering to sell you the odd 42 million other email addresses to spam and perpetuate this mess. My favourites are those classic help-me-move-millions-of-dollars fraud spams that turn up from African countries. And I get a chuckle out of the 'your colleague [insert name] here has just died and has left millions of dollars in our country' spam, particularly when said colleague looks over your shoulder and also has a chuckle.

But porn spam has become so graphic that parents should forget worrying about their kids going out to find porn on the Internet. These days, it comes to you with visual-packed spam that leaves nothing to the imagination — and it doesn't stop there.

According to reports, those images can also act as

beacons. When a spam email turns up in your inbox and your email app is set to automatically preview it for you, it sends a request to a server to send that image through. That request is used by spammers to know that your email address is active, and again, you become the target of even more spam.

Getting caught in the spam trap is pretty easy — you only have to post to a newsgroup or have your email published on a Web page, and eventually the email spiders will find you. And forget the option at the bottom of most of these spam mails to be removed from these lists — that just confirms to the spammer that you're a 'live target' and you get sent on to other lists.

The Sydney Morning Herald ran a story in early May that showed we just might have a chance of winning this battle. Howard Carmack, the clown known in the US as the 'Buffalo Spammer', was found guilty of spamming and ordered by the US District Court to pay ISP EarthLink \$US16.4 million in damages. Carmack was alleged to have sent some 825 million spam emails. At that rate, it's no wonder our Internet connections seem slow with all this junk flying about the system.

Hotmail has often borne the brunt of complaints from users finding their inboxes stuffed full of spam, but it appears Microsoft has woken up to the stench of rotting spam, allowing Hotmail account holders to switch off images within emails.

So just how bad is the spam epidemic? Try this for size: ISP giant AOL announced at the end of April it had repelled more than 2 billion spam emails in a single day. Even if you take AOL's figures for a minute, at 2 billion spam a day, that's 700 billion spam a year caught by one ISP. Spam on that scale can do nothing but slow down the World Wide Web, slowing legitimate business email and costing millions worldwide in lost revenue.

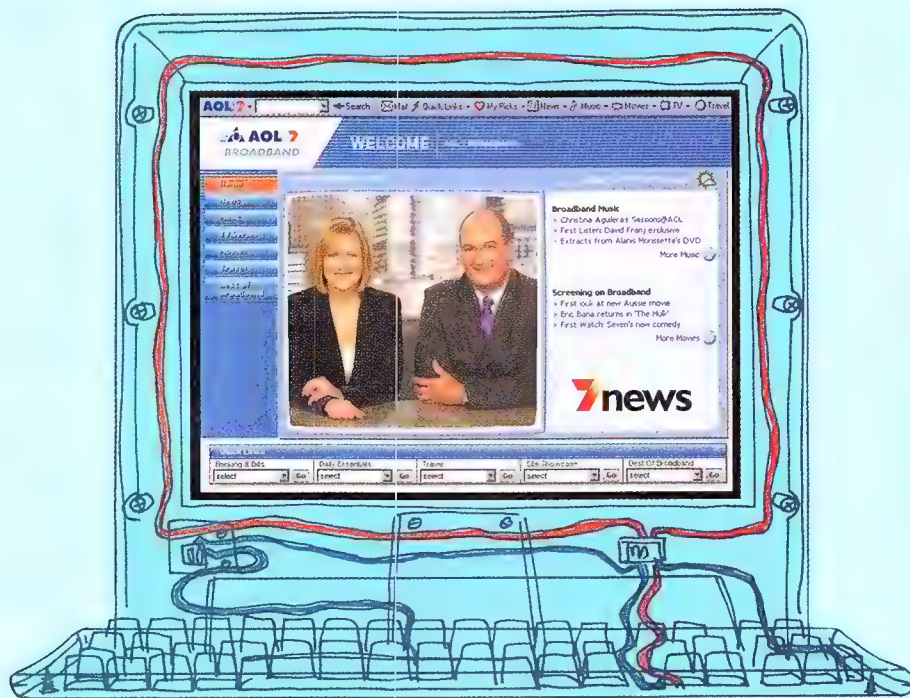
The National Office for the Information Economy (NOIE) released a report in April, recommending the government adopt legislation prohibiting spam and include plenty of 'legal persuasion' to back it up. The same report says about 16% of worldwide spam originates in Australia. The NOIE report refers to an EU study, claiming spam costs the world economy \$16.8 billion a year, and a UK study that says it costs nearly \$1,000 per employee per year in lost productivity. When you consider the cost of transmitting it, storing it, removing it and eradicating it, it seems perfectly plausible to me.

While EarthLink may have won against the 'boofhead spammer', there's only one way to combat spammers — lock up the bastards. **PCU**



Illustration: Getty Images

Get used to the freedom of AOL|7 Broadband.



Free broadband modem. Free standard connection. Limited time offer.

Introducing AOL|7 Broadband, the ADSL broadband service that has been custom-designed in Australia to bring you the Net with a new kind of freedom.

The freedom to go where you want, when you want, how you want. The freedom to choose the browser that you prefer (Netscape or Internet Explorer). The freedom to choose your own e-mail program.

With AOL|7 Broadband, you don't have to pay for local call costs to connect or

reconnect to the internet. And you don't need to pay for a second phone line for the internet.

Plus, you can enjoy great content including Seven News on Demand.

If you've been thinking about broadband, take a closer look at AOL|7's ADSL Broadband. With a free modem and no standard installation fees when you sign-up on one of our 24 month contracts, what are you waiting for?

1800 265 003
aol7.com.au

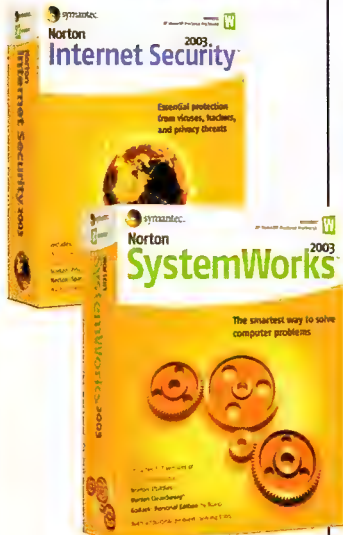
To find out more and register today, call us or visit our website.

AOL|7
BROADBAND
Get used to freedom.

Contact us to see if you can get AOL|7 Broadband in your home. Offer ends 30th June, 2003.

Various plans are available to suit your needs. Conditions apply, including a 24 month connection Contract Term. Minimum monthly access fee of \$64.95 available on the Freedom plan. Total minimum cost on the 24 month contract Freedom plan of \$1558.80 over 24 months. Balance of monthly access fees payable if service terminated before end of 24 month Contract Term. Full plan details available online at aol7.com.au.

LETTER OF THE MONTH



This edition's Letter of the Month winner receives Norton Internet Security 2003 and Norton SystemWorks 2003, thanks to Symantec. Internet Security provides essential protection from viruses, hackers and privacy threats, while SystemWorks is the smartest way to solve computer problems. Both programs are valued at \$149.95.

What to do with that old computer

I recently took the plunge and decided to build a Pentium 4 system. My dilemma now is what to do with my old Compaq Pentium II. Should I sell it, turn it into a jukebox, or perhaps use it as an education machine?

The idea of selling it was quashed because, let's face it, it's worth more to me than to someone else. I then looked at turning it into a jukebox. I decided to buy a second-hand video card with a TV-out port, so that I could use my TV as a low-resolution monitor and connect the soundcard to my hi-fi system. This idea was also quashed since my partner was not going to tolerate an ugly beige box in our nice timber entertainment unit.

So, I was left with an 'education machine'. I have been keen to look at Linux, but not keen on a dual-boot system. I purchased a KVM switch on eBay and, while doing the grocery shopping, found a copy of a book entitled *Operating in Linux* at Coles, which came with a three-disc set of Mandrake Linux 9.0 and a whole pile of other goodies. Looking at the Internet, I have found that there's a smorgasbord of free software out there.

I thought *PC User* readers might be interested in hearing about some possible uses for their humble old computer, rather than having it sit in the bottom of the cupboard collecting dust. This is a very cheap way to get into computing and there is plenty of Linux software out there. Thanks for a great magazine. Keep up the great work.

Alan Rackham
Internet

■ The writer of the best letter to *PC User* each month wins a prize. Just send your letter of no more than 300 words to *PC User* (see 'How to contact us', page 12), and

please include your postal address and daytime telephone number. Entry is open to all residents of Australia other than employees of ACP Publishing. Entries for September close on July 11. The judges' decision is final. All entries become the property of ACP Publishing.

Stop the junk mail

One of the biggest problems that people today have is with unsolicited, bulk, abusive or fraudulent email. I am writing this letter because I feel that ISPs have a duty of care to validate the source of all email they receive, because they can. If all reputable ISPs turned on the option that allowed only email from verifiable servers to be accepted, then the problem would stop overnight. Why haven't they done this? Trying to get an answer on this out of my ISP (Telstra) got me nowhere.

I received an email regarding a 'funds transfer' from a foreign country. As a mail administrator, I knew this to be a variant of the Nigerian scam. I checked the header information and found that the server information that Telstra recorded was a forgery. How do I know this? Because it came with an IP of 192.168.114.14, and this is from the range of reserved IPs for private networks, and is not routable over the Internet. So, either they sent me the mail, or they accepted the mail from an external server without verification of its identity.

I feel this is unacceptable and something should be done about it, if not to stop spam and junk mail, then for the safety and security of unsuspecting users.

Name withheld
Sydney, NSW

PC USER JULY 2003 SUBSCRIPTIONS PROMOTION TERMS AND CONDITIONS OF ENTRY

■ Information on how to enter and prizes forms part of these conditions of entry. ■ Entry is open to all residents of Australia who subscribe or renew their subscription to *PC User* magazine between 09/06/03 and 13/07/03. Entry is subject to the correct use of a valid credit card or, if payment is made by cheque, the cheque must be cleared for payment. Subscriptions are to be sent by mail to PC User, Reply Paid 3357, Sydney 2001; or made by telephone on freecall 13 61 16. Employees of the Promoter and their immediate families and agencies associated with this promotion are ineligible to enter. ■ Promotional period commences 09/06/03 and closes 23:59 EST on 13/07/03. The draw will take place at 11:00 EST at ACP Tech, Level 9, Stockland House, 175-183 Castlereagh Street, Sydney, NSW 2001 on 16/07/03. The Winner will be notified by mail and their name will be published in the Public Notices section of The Australian on 23/07/03. Judges' decision is final and no correspondence will be entered into. ■ The first valid entry drawn will win a Fujitsu Stylistic ST4110 tablet PC, valued \$4,399. Prize is not transferable or exchangeable and cannot be taken as cash. The Promoter is neither responsible nor liable for any change in the

value of the prize occurring between publishing date and the date the prize is claimed. ■ The Promoter may conduct such further draws at the same place as the original draw as are necessary on 31/10/03 in order to distribute any prizes unclaimed by that date subject however to any written directions given under Reg 37 of the Lottery and Gaming Regulations 1993 (SA). ■ The Promoter shall not be liable for any loss or damage whatsoever which is suffered (including but not limited to indirect or consequential loss) or for any personal injury suffered or sustained in connection with the prize except for any liability which cannot be excluded by law. ■ The Promoter accepts no responsibility for late, lost or misdirected mail. The Promoter is not responsible for any prizes damaged in transit. ■ All entries become the property of the Promoter. The collection, use and disclosure of personal information provided in connection with this competition is governed by the Privacy Notice (see Contents Page for location in this issue) ■ The Promoter is ACP Publishing Pty Ltd (ABN 18 053 273 546) of 54-58 Park Street, Sydney, NSW 1028. ■ Authorised under NSW Permit No TPL03/04417 SA: T03/1740 ACT: TP03/1814 NT: NT03/1593

PRIVACY NOTICE

This issue of *PC User* published by ACP Publishing Pty Ltd (ACP) may contain offers, competitions or surveys which require you to provide information about yourself if you choose to enter or take part in them (Reader Offer). If you provide information about yourself to ACP, ACP will use this information to provide you with the products or services you have requested, and may supply your information to contractors that help ACP to do this. ACP will also use your information to inform you of other ACP publications, products, services and events. ACP may also give your information to organisations that are providing special prizes or offers and that are clearly associated with the Reader Offer. Unless you tell us not to, we may give your information to other organisations that may use it to inform you about other products, services or events or to give to other organisations that may use it for this purpose. If you would like to gain access to the information ACP holds about you, please contact ACP's Privacy Officer at ACP Publishing Pty Ltd, 54-58 Park Street, Sydney, NSW 2001.

What's in a number?

I have read the great article on Google in your May issue. But later, while reading the local paper, I came across a marketing company's ad that claims there are "250 million searches per day on Google". Slightly different from your numbers (150 million searches), but I think I'll stick to your numbers, based on the rest of your article.

As for your reader from Allambie Heights in the May issue, regarding the early release of *PC User*, so what if your magazine is out early or not? Maybe he needs to get a life. I wonder what he must do for fun. I'll still be going over the articles when the next month arrives and go back to them later as a reference. Good stuff, keep it up.

Les Skennar
Internet

Junk mail nightmare

The nightmare began when I sent an email to someone about maps I wanted to purchase, and used my personal email address.

One week later, this guy must have been hit by a virus because he sent an email to his whole address book to warn about a possible threat. Then some of the receivers must have hit the 'Reply to all' button and an avalanche of emails was produced which, I fear, distributed my email address worldwide.

A week later, the first junk mails dropped in to my private address, which had never happened before in the four years I've had my email address. More and more junk followed and I just continued to delete them.

But today I was really shocked, when I received another junk email showing my own email address as the sender! How can junk mail distributors use my address to distribute their emails? What can be done against it? Is the only possibility to change my email address?

Chris
Diamond Creek, Vic

Internet safety

Until recently, like most people who use the Internet, I did not have a firewall of any sort in place. I have been using the Internet for a few years now and a couple of months ago, I installed Norton Personal Firewall. All was well and I had a few intrusion alerts that I blocked.

On May 28, I logged onto the Internet at 9.56pm and started to wander around a few sites. About 30 seconds later, I had the first intrusion alert — and they just kept coming through until 10.12pm when I made a rule to automatically block the intrusions. I had a total of 42 intrusion alerts in 16 minutes. I made a note of all the DNS numbers and went to a site to check all the DNS addresses. They were all from major Internet service providers, and some were sent numerous times.

I emailed my Internet provider, Telstra BigPond, to tell them that I was sick of the intrusions and that they should do something about it. I have heard nothing in reply since. I've also not had as many intrusions since that time, but on April 18 and April 20, I had intrusion alerts warning me of a 'backdoor/subseven Trojan horse'.

It just goes to show how safe we are. I recommend everyone install a firewall.

Colin Debney
Miles, Qld

Dreaming again

There it is, all shiny and new. The case is a gorgeous black with silver trimmings, the monitor glistens in the light, the speakers reflect a streamline design. You start to feel like a pup with a huge steak in front of it. The sign tells you what is in it — a fast CPU, huge hard drive, heaps of RAM, great monitor — and you want it. You want this computer in all its glory until you look at the price . . . oh no! It's not fair. Your old faithful will just have to do. Or will it?

There's an old Intel 533 at home, sitting in a midi tower case on a Gigabyte dual board. It's a good system — a gigabyte of RAM is nothing to laugh at, nor is the PC's 32M video card. The 17in monitor, the speakers, mouse and keyboard all make a very nice unit. But what can you do to update it? Let's look at getting another processor, a better video card, bigger speakers, larger hard drive and maybe more RAM. But how do I go about doing it? >>>

Connectland
"Making all the right connections"

Upgrade
your computer to

USB2.0 NOW!

one price



get both!

RRP: \$69.95 (inc. GST)

USB Integrator

Features:

- Upgrade to the blistering speed of 480Mbps
- Connect up to 127 devices including your USB enabled Digital Camera, Printer, Scanner, Keyboard, Mouse, Speakers and Modem
- Fully backwards compatible with existing USB devices (USB v1.0, v1.1)

Kit includes

4 Port USB2.0 Hub,

Extension Cable and 2 Port USB2.0 PCI Card

RAID CARD

Ultra ATA 133

IDE Controller card + RAID

RRP: \$68.00 (inc. GST)

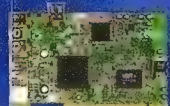


COMBO CARD

Firewire IEEE1394a 2+1 Port

and USB2.0 2 Port PCI combo card

RRP: \$110 (inc. GST)



For more information please talk to your local reseller

Authorised distribution partner

Peridyme

Telephone: (02) 9822 9235 Facsimile: (02) 9823 9590

Email: sales@peridyme.com.au

www.peridyme.com.au/connectland

Copyright Peridym Pty Ltd. All right reserved.

SUBS WINNER

The lucky winner of our May subscription competition is M Tilley from St Ives, NSW. M Tilley has won a BenQ Joybook 8000, valued at \$3,999.

CORRECTION

On page 131 of the May issue, we incorrectly listed a phone number. The telephone number for Quadtel should read (02) 8852 4600. *PC User* apologises for any inconvenience caused.

AD INDEX

ACCPAC.....	107
Acer.....	2, 3, gatefold, 33
ACR.....	133
Altech.....	141
Anywhere Computers.....	147
AOL.....	15
Apple.....	4, 5
APUS.....	140
ARC.....	146
Belkin.....	19
BenQ.....	115
Canon.....	IBC, 8, 9
Corporate Software.....	134, 135
Creative Labs.....	IBC
Dell.....	IFC, gatefold, 1
DODO.....	37
Epson.....	25
Fujitsu.....	31
Jaycar.....	142
JG Net.....	139
Megalex.....	129
MicroGram.....	138
New Reality.....	136, 137
Ozieweb.....	145
Pacific Internet.....	23
Panasonic.....	13
PC Range.....	39
Peridyme.....	17
PowerQuest.....	27
Reclon.....	143
Subaru.....	20
TI Computers.....	144

««« It is with magazines like *PC User* that I get a look at new products and ideas, and see how products compare. There are Web addresses for me to read up the specifications of the products and see if they are capable of running with the hardware I have.

Now, even a sit-at-home mum can have a basic understanding of how computers work. A computer salesperson cannot baffle you with jargon if you have a basic understanding of what you are seeking.

These magazines also help me dream of when I will have my sleek AMD 2800 and 21in monitor. I know, dream on!

Susan Thompson
Clybucca, NSW

More on mice and keyboards

We all use them, no matter what use we put our PCs to, and yet they vary in price from a few dollars up to many hundreds of dollars. I am referring to the overworked mouse and keyboard.

Having an inbuilt aversion to paying for more than I need, I have always gone for the cheapest option, but I now wonder what I am missing out on. As I work in a country home office, the drive bits on the mouse are forever in need of cleaning (and eventual replacement). As for the keyboard, I find the bent ones uncomfortable for hunt-and-peck typing. I'd like to see if more expensive options are any better than cheap ones, though I doubt any keyboards have overcome their ability to hide the key I am currently looking for — I know it was in a different place last time I used it!

I'd like to see a review on the bewildering array of mice and keyboards available. You could cover it with your usual attention as to what you really get for your dollar, what you need, what is handy and what is only a gimmick.

Alan Beaver
Warwick, Qld

The perfect case

Having a back condition that causes me problems with bending, but not wanting a desktop tower case, I searched long and hard for a case that had something I really needed — an on/off switch at the top. This top switch enabled me to sit the case under my desk, without the need for me to bend over to turn the computer on and off.

The case I found and had my computer built around was a Macase Galaxy Full Tower, an extremely good, strong AT case worth in excess of \$200. At the time I bought it, it was expensive, but it was the only one that met my needs. Today it runs a K6 system, but because it is an AT case, I know it has a limited future.

Although the case is better than most others around, unfortunately, it cannot be used as the basis for a modern computer, and it will have to go if I want to upgrade. But why? Why is it that the manufacturers cannot supply a new back plate to fit the case, making it usable for the long term? I can buy and fit a new ATX power supply and switch, no problem, but the back plate shouldn't be that hard to supply, should it?

We see too much of old computer parts going to the tip, but in reality, items like cases have no need to be discarded. I am not into case modding; to me, a case houses the computer parts. It sits under my desk, and whether it's beige, black or whatever is of no concern to me.

Colin Hussey
Internet

Why take Windows 98 away?

Bill Gates' (shrewd) policy to support any version of Windows for a five-year period after release is going to cause dedicated PC users considerable angst over the coming years.

In computing terms, 60 months maybe a long time, but a number of users and gamers want/require DOS to sit under their Windows applications. Windows XP, for example, does not have full compatibility with DOS and does not even support all of the batch commands such as **CHOICE** (incredible!). Some users have a huge investment in DOS-based applications and knowledge that will be rendered redundant with newer releases of Windows.

I recently experienced a very tricky hardware problem on my computer that I could diagnose only by running various real-mode DOS-based diagnostics, and comparing the results with protected-mode Windows diagnostics. Had I been running Windows XP only — my computer is configured as a dual-boot machine with 98SE and XP — I am sure I would have had to pay a technician for the remedy and lost considerable machine time.

Bob Kitch
Kenmore, Qld

No more 98 support?

I am interested to know how Microsoft means to advance when many people remain using Windows 98, since they did not see the need to upgrade to Windows Me and have not yet upgraded to Windows XP. Since Windows 98 will lose its support from Microsoft this year, many who have not saved critical patches or have no means of storing them will have unpatched systems, providing a fertile breeding ground for worms and viruses which are becoming ever smarter.

With changes in the licencing system of Windows XP restricting the installation to one install per copy, no matter what, it's also made it very expensive for home owners with small LANs to upgrade to XP. Microsoft should either keep supporting Windows 98 and improving the patching system, or at least circulate one last compendium of all the most critical patches for Windows 98. Alternatively, they can lower the price of new OSes (considering new competition from the increasingly user-friendly Linux releases) and relax licence restrictions so that less copies are needed for the increasingly prevalent and popular small home LANs.

Aaron Smith
Adelaide, SA **PCU**

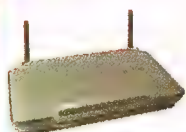
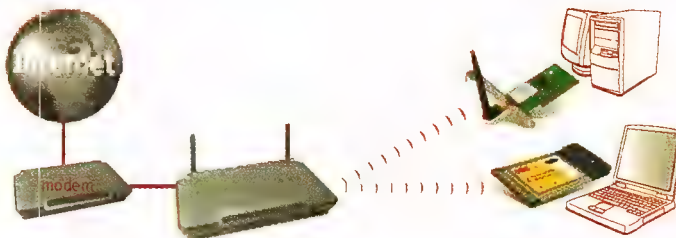
**BELKIN**

Wireless Networking Made Simple **54g**

- Simultaneously share your cable/DSL Internet access with multiple computers
- Share files and other network peripherals (printers, scanners, DVD-ROMs, CD-ROMs)
- Works with 802.11b products and coffee shop/airport "hot spots"

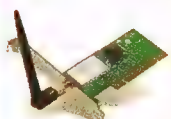
And do it all using the fastest wireless technology available – 54Mbps!

Virtually
5x
FASTER



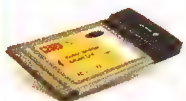
54g Wireless Cable/DSL Gateway Router-F5D7230au4

- Shares your high-speed Internet connection with all your computers
- Offers 6 months free of Parental Control: Web Content Filter to protect your children from objectionable web content
- Offers Easy Install Wizard to have your network set up in under 3 minutes
- Works with all 802.11b devices
- Connects wired computers with its built-in switch



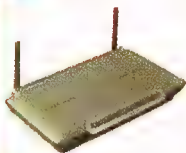
54g Wireless Desktop Network Card-F5D7000au

- Connects your desktop equipped with an available PCI slot to a wireless network
- Works with all 802.11b devices
- Features 64- and 128-bit WEP encryption
- Works with Windows® 98 SE, 2000, Me, or XP



54g Wireless Notebook Network Card-F5D7010au

- Connects your notebook to a wireless network
- Works with all 802.11b devices
- Features 64- and 128-bit WEP encryption
- Works with Windows 98 SE, 2000, Me, or XP



54g Wireless Network Access Point-F5D7130au

- Allows you to add 54g wireless networking to an existing network
- Expands the coverage area of an existing wireless network
- Features 64- and 128-bit WEP encryption
- Works with all 802.11b devices

Questions about Networking?
Want to know your nearest stockist location?

1800-235-546 or visit www.belkin.com/anz



Belkin, Ltd.
+61 (0) 2 4372 8600
West Gosford • Australia

Belkin Components, Ltd.
+44 (0) 1933 35 2000
Rushden • United Kingdom

Belkin Corporation
310.898.1100
Compton • CA • USA

© 2003 Belkin Corporation. All rights reserved.
All trade names are registered trademarks of
respective manufacturers listed.

23AD005



STi
SUBARU TECNICA
INTERNATIONAL

With 195kW of raw rally-bred power the new Impreza WRX STi is music to your ears.

www.subaru.com.au



To hear it live or to find your nearest STi Authorised Dealer visit www.subaru.com.au



Mini PC desktop replacements

The **PC User** team tests a variety of PC hardware, starting with two mini desktop replacement systems.

MAXTOR ATLAS 15K 73G

8 Price: \$1,199
Contact: Maxtor
Phone: (02) 9369 3662
Web: www.maxtor.com
✓ Super fast data transfer
✓ Excellent average access time ✗ Price

This hard disk drive has a super fast Ultra320 SCSI interface, a rotational speed of 15,000rpm and a capacity of 73G. The 3.5in drive has the standard external dimensions. The 68-pin Ultra320 SCSI interface and power connector are on one end of the drive, with configuration jumpers at the other end. Data throughput was 73.6Mbps on outer tracks, and 54.4Mbps on inner tracks; average access was 5.87mS — both much faster than the fastest IDE drives we've seen. Ideal for servers, RAID arrays, and extreme performance workstations.

— John Hepworth



WINBENCH 99	OUTER	INNER	AVERAGE SEEK TIME
Throughput	73.6Mbps	54.4Mbps	5.87mS

Iwill XP4 Mini PC System

7 Price: \$299 Contact: eComputer Store Phone: (02) 9530 0964 Web: www.ecomp.com.au ✓ Compact barebones PC ✓ Supports 3.06GHz Pentium 4 ✗ No FireWire or AGP slot

The push is on to drop the size of desktop PCs and morph them into a home entertainment megacentre, and it's the Taiwanese motherboard vendors leading the charge. The Iwill XP4 is a brushed aluminium mini PC, containing a power supply and built-in motherboard — you add your own processor, memory, hard drive and CD-ROM drive. It's built around an Iwill Intel 845GV-chipset micro motherboard, supporting Celeron and Pentium 4 processors, with 400 or 533MHz frontside bus (FSB) support. However, it won't handle the new C class Pentium 4 chips with the 800MHz FSB. There's room for one hard disk drive, one CD-based drive and one stick of DDR memory. There's only one PCI slot and no AGP graphics port — the motherboard features Intel's integrated 845G graphics engine. There's no FireWire port or S-Video output, but it has built-in Fast Ethernet networking. We installed a Pentium 4 processor with a fan, a 40G drive and a

CD-ROM drive and there wasn't much room left, particularly around the processor fan.

Add in a PCI FireWire card, a 120G hard disk drive (parallel ATA only) and a DVD burner for an incredibly compact digital video editing machine. The power supply is only rated at 180W, below the 250W recommended by Intel for processor speeds above 2GHz, but given the few internal components, it should be fairly safe. The board also comes with six-channel analog audio and S/PDIF in and out ports, but these digital audio ports are not brought out to the casework. All up, this is better suited to general home or small business computing than serious home entertainment.

— Darren Yates



Soltek Qbic EQ3000W

8 Price: \$575 Contact: Altech Computers Phone: (02) 9735 5655 Web: www.altech.com.au ✓ Pentium 4 Hyper-Threading support ✓ AGP ✗ Smallish 200W PSU

The Soltek Qbic EQ3000W is large enough to be considerably more useful in a wider range of applications than the Iwill XP4. It features a Soltek motherboard with support for 400 and 533MHz frontside bus Intel Celeron/Pentium 4 processors, and is Hyper-Threading ready. It also has two memory slots plus an AGP4X graphics card slot, so it's suitable for 3D gaming. The built-in Fast Ethernet port will also help there. It can handle two 3.5in drives (one with external access), plus two 5.25in CD-based drives and the front panel is loaded with ports — two USB ports and three FireWire ports give you plenty of access to external peripherals. It also features optical

digital audio in and out ports — the first time we've seen these on any desktop PC, let alone a mini PC. The power supply is a slightly larger 200W, but given the extra peripherals that can be connected, I have more concern with this unit than the XP4 in this area. The white Apple-like case is also available in a mirror finish and being just that little bit larger, there's more room for cables and better airflow around the Pentium 4 processor heatsink/fan combo.

The Qbic is nearly twice as expensive as the XP4, but it's more useful for 3D gaming/digital video editing with those extra bays, ports and slots. For a small business/home office, I'd go with the XP4, but choose one this for serious home entertainment. All up, this one won't deliver any speed records, but it's one way to keep the size of your desktop down to a realistic minimum.

— Darren Yates >>>



We put the Service back into Internet Service Provider

*Home dial-up
Rated 9 out of 10*
by PC User magazine, April 2003

PC USER

First for customer service. First for helpdesk access. First for satisfaction with level of busy signals. That's how our customers ranked us in an independent survey*.

But first-class service is only half the story. Our flexible broadband and dial-up plans come with 24-hour technical support and low monthly rates. Plus, you get fast connection.

**First-class unlimited dial-up
just \$24.95† per month
with free spam and email virus filters.**

Now that's what we call service.

**Call 1300 553 818 or
visit www.pacific.net.au**



**Pacific
Internet**

The experience you're looking for.

† Premium Unlimited dial-up plan: \$24.95 per month (incl. GST) for unlimited hours and downloads. Four hour session limit applies. Reconnect immediately.

All plans subject to Terms and Conditions located at www.pacific.net.au/terms/

All plans come with 5 email addresses and 10MB webspace. Minimum 1 month connection.

* ACNielsen consult 13th Australian Online User Survey, 2H 2002.

PAC5027/PCU/R

FC-4S3 MULTI ADAPTER PANEL

Price: \$52
Contact: Anyware Computer Accessories
Phone: (02) 9879 5788
Web: www.anyware.com.au
 ✓ Front-mounted port extension ✓ USB 2.0, FireWire, audio and PS/2 ✗ No amplifier or hub electronics.

Tired of crawling under desks to plug cables into the back of towers? The FC-4S3 Multi Adapter Panel is fitted to a drive bay at the front of the computer and extends most ports at the back of the computer. It has two USB 2.0, two FireWire, one PS/2 mouse or keyboard, microphone in, line-in, and speaker out ports.

A multiway cable runs from the rear of the panel, and out an expansion slot. Each subcable then plugs into a matching connector on the rear of the computer.

The unit is completely passive, acting only as a bunch of extension cables. There are no chips for an audio amplifier, USB hub or FireWire repeater. The FC-4S3 is a neat way to provide front access for all of those rear-mounted ports.

— John Hepworth



Sony CLIÉ PEG-TG50

RATING **Price:** \$849 **Contact:** Sony **Phone:** 1300 137 669
Web: www.sony.com.au ✓ Built-in Bluetooth
 ✓ QWERTY keyboard ✓ Music/video support

Sony keeps cranking out the CLIÉ handheld models and although recent units we've seen have become rather bulky, the new PEG-TG50 returns to the slim lines of the original models, but adds in some excellent extras.

The screen continues to be Sony's high-resolution high-contrast 320 by 320-pixel unit, but the TG50 also features a QWERTY keypad. If Graffiti script gives you the pip, you can now enter in text faster than you can SMS on your mobile phone.

With built-in Bluetooth, you can also connect to your phone wirelessly. It runs a lower-speed 200MHz Intel PXA250 processor and comes with 16M of memory onboard, which can be expanded through Sony's MagicGate memory stick slot. The unit comes with a USB cradle, but you can also plug in the external power brick and recharge the built-in Lithium Ion battery.

There's no built-in digital camera in this one, but you do get access to music via the stereo 3.5mm headphone socket. A built-in microphone also allows you to perform AM radio quality voice recording.

If you already have a Sony audio player, the TG50 also plays ATRAC music files. Built on Palm OS 5, it also comes with a raft of software including Sony's own AudioPlayer and MoviePlayer software.

The jog dial allows you to find your way through onboard applications without having to pull out the stylus, but one area of concern is that the stylus now slides out of the bottom of the unit — you'll need to be careful you don't accidentally lose it.

At \$849, it's pricey, but practical. And weighing under 190g, it won't pull the stuffing out of your pocket. The TG50 takes the CLIÉ back to its slimline roots, with the emphasis on features and business value. I'd still recommend you take a look at the HP iPAQ H1910 first with its \$695 price tag, but if that doesn't do anything for you, there's a good chance the PEG-TG50 will.

— Darren Yates

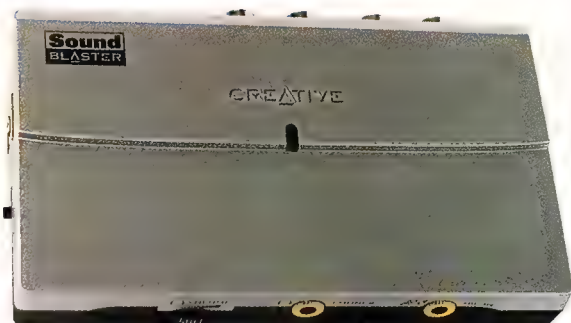


Creative Sound Blaster Digital Music

RATING **Price:** \$149 **Contact:** Creative Labs **Phone:** (02) 9666 6100 **Web:** www.australia.creative.com
 ✓ Compact ✓ Digital audio ✗ Cannot handle CD-compliant (2Vrms) audio

Take Creative's excellent external Extigy soundcard, shrink it down to include just stereo line in and out, optical digital in and out, headphone and microphone ports, and you've pretty much got Creative's new Digital Music box. About the size of a standard notebook hard drive, Digital Music is aimed at those looking for a low-cost solution to improving PC/notebook audio without going over the top. It connects to any PC or notebook via a standard USB 1.1 port and requires no external power brick — it takes its power from the USB port, and as we'll show you, that's its downfall. Because of a USB port's low 5V supply voltage, the unit cannot handle true CD audio levels. Pump in a 2Vrms sine wave through the line-in sockets and the distortion is horrific (2Vrms equals approximately 5.6V peak to peak, which is beyond the 5VDC capabilities of the USB power provisions). The

ideal way to use the Digital Music is as an extension of your PC — play DVD movies through it, with PC audio via headphones. You can even use it to



pass through Dolby Digital AC3 or DTS multichannel audio via the optical digital audio ports. Personally, I would have thought coaxial digital audio ports would have been more in keeping, though. At 1Vrms input, the total harmonic distortion (THD) is an excellent 0.008%. Frequency response is within ± 0.5 dB from 20Hz to 20kHz and the signal to noise ratio (SNR) is 96dB (A-weighted) and 82dB with no filtering. We tested it on an old 400MHz Pentium II Compaq desktop PC using Windows 98SE, so you shouldn't have any problems with anything newer than that. It comes with a raft of Creative software for Windows (no support for Macs) including its MiniDisc Center, a 10-band graphics equaliser and WaveStudio software.

Unfortunately, the USB port was never designed to handle this sort of a job, so we recommend if you want a high-quality external USB sound option to record and replay, stick with the Extigy.

— Darren Yates >>>



**QUALITY PHOTOGRAPHIC
PRINTS NOW IN
THE COMFORT OF YOUR
OWN HOME.**

INTRODUCING YOUR PERSONAL HOME PHOTO LAB - The 6-colour EPSON STYLUS Photo 830U. It makes printing beautiful photo-quality images at home a breeze. And best of all, you have the versatility to print black and white to full vibrant colour and everything in between, like brochures and newsletters to your favourite happy snaps. Plus, printing from home means you get to choose to print only the images you want. Of course, EPSON products aren't complete without cutting edge technology - 5760 optimised dpi using Resolution Performance Management Technology, PRINT Image Matching II and PerfectPicture Imaging System just to name a few of EPSON's pioneering technologies. The EPSON STYLUS Photo 830U, it's more than an inkjet, it's a photo lab you can take home. Phone 1800 652 726 or visit www.epson.com.au

**DEMAND ONLY
GENUINE EPSON
INKS+PAPERS**

**FOR BRILLIANT RESULTS AT HOME USE
GENUINE EPSON INKS AND PAPERS.**

EPSON®

SITECOM MULTIPLAYER GAMERS NETWORKING

9 Price: \$39
Contact: Anywhere
Computer Accessories
Phone: (02) 9879 5788
Web: www.sitecom.com
✓ Complete LAN ✓ Very
good performance
✗ Needs hub to network
third computer

This is a great way to network two computers for games or any other purpose. There is no hub in the kit, so you'll have to buy one separately to add a third or subsequent computer. The kit contains two PCI 10/100Mbps network cards, a 2.5m crossover cable, plus drivers and instructions.

The cards are simply plugged into a spare PCI slot. Windows detects them when it powers up, and loads drivers from a floppy.

Performance was very good, virtually the same as other 10/100Mbps cards we've tested. The only oddity is the name. We've always thought multi meant a number greater than two!

— John Hepworth

<<<

DrayTek Vigor2600We ADSL Modem/Router

RATING 9 Price: \$399 Contact: PC Range Phone: (08) 8322 9544 Web: www.draytek.com.tw ✓ All-in-one ADSL modem, router, and access point ✓ Excellent value
✗ Complex setup

The DrayTek Vigor2600We is a one-box ADSL broadband solution. It combines an ADSL modem, router/firewall, four-port switch, and 802.11b wireless access point.

NAT (Network Address Translation) provides Internet connection sharing and basic security. Simplified SPI (Stateful Packet Inspection) provides additional security. There is also protection against DoS (Denial of Service) and DDoS (Distributed Denial of Service) attacks. Good VPN (Virtual Private Network) support is included.

The wireless access point supports both 64 and 128-bit WEP encryption, and MAC address filtering can be used to limit access to known clients. The unit has all connections for LAN and WAN on the rear, along with the wireless antennas, and indicator LEDs are on the front edge of the top panel. The kit includes a single LAN cable and a phone cable. There is also a CD with a setup wizard, online manual and quick start guide, utilities and tools. An inline filter (required for a phone sharing the same line) is not provided.

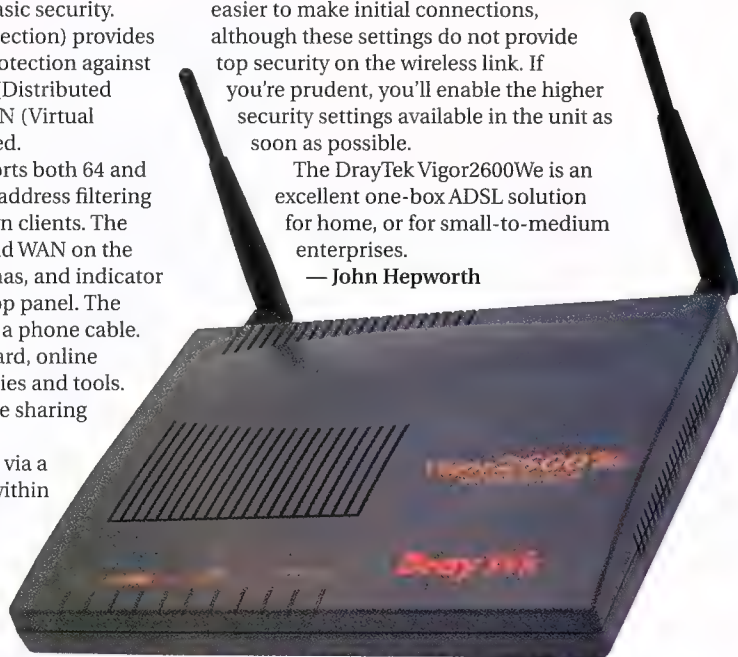
Configuration is across the LAN via a Web browser to a setup Web page within the router. The main Web page has many subpages for configuring all of the functions, although they are not very intuitive. However, a thoughtful user will have few

problems working through them. Initial setup is quite quick using mostly the default settings. There is even a function to autodetect the ADSL parameters, which takes only a few seconds to establish an ADSL link. Then simply enter your user ID and password and you're online.

The default settings do not require an administrator ID or password to open the setup page. In addition, WEP and MAC address filtering default to disabled, which makes it much easier to make initial connections, although these settings do not provide top security on the wireless link. If you're prudent, you'll enable the higher security settings available in the unit as soon as possible.

The DrayTek Vigor2600We is an excellent one-box ADSL solution for home, or for small-to-medium enterprises.

— John Hepworth



Billion BIPAC-741 GE ADSL Firewall Router

RATING 8 Price: \$249 Contact: PC Range Phone: (08) 8322 9544 Web: www.billion.com.tw ✓ Modem, router, firewall and LAN switch ✓ USB and Ethernet ✗ Poor manuals

The Billion BIPAC-741 GE ADSL Firewall Router combines an ADSL modem with a router, a firewall and a four-port 10/100 Mbps network switch.

A neat extra feature is a USB port for connection to a computer.

This is a great way to connect a notebook that has a USB port, but no network card. Even better, the Ethernet ports and USB port can be used at the same time to access the Internet, or to share files and resources across the local network.

The router has NAT for sharing the Internet connection, plus SPI for better security. VPNs are supported as is port forwarding, to allow Internet games or Web servers and the like behind the router.

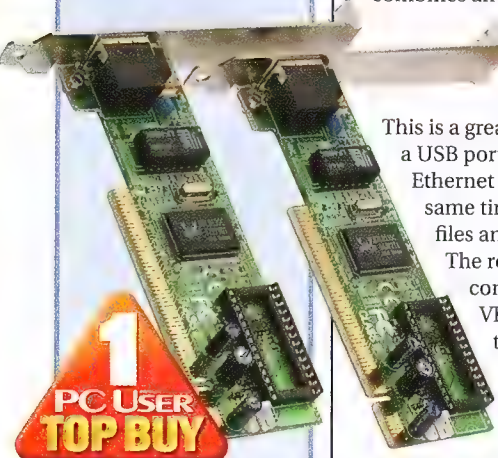
Very simplistic parental control is via packet filtering and URL blocking, but this requires a lot of effort by a knowledgeable

user, and is not capable of wide-ranging protection against unacceptable sites. As is the norm, setup is via a Web page within the router. This can be configured across the LAN or via the USB connection. The Web page is a bit confusing in layout, but reasonably easy to work through.

The very comprehensive kit contains the modem/router, a plug pack, an inline filter, Ethernet and USB cables, a phone cable, a brief printed Quick Start guide, and a CD with USB drivers and a slightly better manual.

The Billion is a very nice unit if you want a one-box solution without wireless, with the USB connection a very useful plus.

— John Hepworth **PCU**



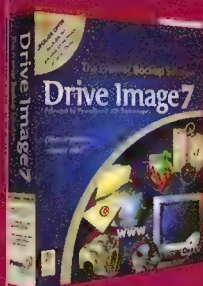
1
PC USER
TOP BUY

Simply Protect Everything



Backup with Drive Image 7

Every computer is vulnerable to data loss caused by viruses, faulty software or hard disk failure. Drive Image 7 provides a complete backup solution, saving you hours of frustration. With your operating system, programs and settings as part of one backup file, you can have your computer up and running again in a matter of minutes.



With Drive Image 7 you can:

- > Backup your entire computer without leaving Windows*
- > Save your backup to virtually any media or drive*
- > Safely restore your entire system or just selected files*
- > Schedule automatic backups*

For more information, call 1800 733 003 or visit www.powerquest.com/pcuser.

© 2003 PowerQuest Corporation. PowerQuest products may be protected under U.S. and International patent law or pending patents. PowerQuest and Drive Image are registered trademarks of PowerQuest Corporation in the United States and elsewhere.



Top five notebooks under \$3,000

Ready to join the growing number of consumers on the hunt for a notebook computer? Darren Yates puts out the call for the best sub-\$3,000 notebooks.

ABOUT OUR TOP FIVE

After testing over 50 desktop PCs for the June edition's cover feature, we decided to take a different approach for this month's 'Top five' feature by testing notebook PCs. We will resume testing desktop PCs in next month's 'Top five'.

For those unfamiliar with our regular 'Top five' feature, here's how it works. All of the systems that we receive undergo preliminary testing, and we use these results, as well as our judgement of each system's features and price, in deciding the five that offer the best overall value. We then put these five systems through another barrage of tests, and again review what value they offer the buyer, in deciding the final 'Top five'. See 'How we tested' on page 30 for more details.

Note that to participate, each vendor must sign a document guaranteeing that the system supplied to PC User (with the exact same specifications or better) is available at the stated price until the end of PC User's onsale period (which is July 14 for this edition). And of course, we can only test the systems, not the vendors' after-sales service.

Notebook computers continue to grow in popularity, so much so that notebook-only vendor Toshiba has now made the number three position its own in total PC sales in Australia, according to the latest report from IT data research firm, IDC. However, buying a notebook these days doesn't mean spending \$4,000 or \$5,000 — how does \$3,000 sound? With wireless

networking, Intel's latest Pentium-M processors, TFT wide screens, CD-RW/DVD-ROM combo drives, FireWire and USB 2.0, there's something for everyone in this budget category.

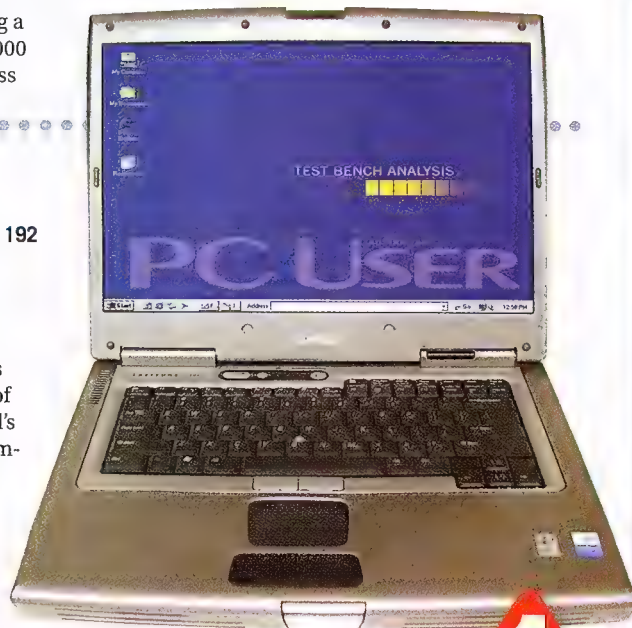
Dell Inspiron 500m

Price: \$2,999 **Contact:** Dell Computer **Phone:** 1300 303 192

Web: www.dell.com.au ✓ Centrino platform

✓ Three-hour battery life ✓ Fastest Office XP notebook

The range of notebooks in this price bracket is as diverse as we've seen, but we couldn't go past Dell's new Inspiron 500m. It's an excellent combination of features, performance and price, starting with Intel's Centrino platform, consisting of its 1.4GHz Pentium-M processor, 82855GM chipset and PRO Wireless/2100 WiFi wireless networking. It was one of two Centrino models we received, but it was clearly the faster of the two. That Centrino platform showed up one of the features we liked most about this unit: performance. The 500m was clearly the fastest notebook on Office XP tests and came in equal third for multimedia/content creation. In the past, a fast notebook was a heavy unit with poor battery life. Centrino takes care of that — the 500m weighs only 2,469g, making it the lightest notebook we tested — but it also manages a three-hour battery life, and that's with all power management switched off. The 14.1in active screen relies on Intel integrated graphics, but still passes the 100 frames per second (fps) barrier on Quake



III at 640 by 480-pixel/16-bit colour resolution — a feat only one other notebook managed. The 40G IBM hard disk drive wasn't only generous, but also the fastest drive we tested at just under 5Mbps data transfer speed. A DVD-only optical drive was the minor drawback with this unit, but the 500m is still the ideal notebook when you need your computing portable, fast and cheap.



Hi-Grade Notino W6700

Price: \$2,999 **Contact:** Hi-Grade Australia

Phone: 1800 770 550 **Web:** www.higrade.com.au

✓ 15.2in TFT wide-screen ✓ Three-hour battery life

✓ Excellent 3D speed

Hi-Grade's Notino W6700 couldn't keep up with the Dell Inspiron 500m on Office XP or multimedia/content creation applications, but it came a very close for overall value. The W6700 is the first wide-screen notebook for under \$3,000 — that on its own is no mean feat, but when you consider it still manages to produce the same battery life as the Inspiron 500m, the W6700 keeps getting better. It also features decent 3D graphics by way of nVidia's

GeForce4 440 Go graphics chip. If you wanted to show off at a LAN party, the W6700, with its 177fps on Quake III at 640 by 480-pixel/16-bit resolution and wide screen, would be a fun way to do it. Intel's 2GHz Pentium 4-M processor produced the slowest results of the top five on Office XP tests, but outperformed IBM's ThinkPad R40 on multimedia/content creation. Usually, the inclusion of a Pentium 4-M processor means short battery life, but the W6700 still manages to eke out just over three hours' running time on its Lithium Ion battery, which is a pretty good effort. Matsushita's slot-loading CW-8121 CD-RW/DVD-ROM drive easily adds to the value provided in this unit, along with the FireWire and S-Video-out ports. If not

for the lacklustre performance, the W6700 could have gone very close to taking the top spot. As it is, if you want more creature comforts than the Inspiron 500m provides for the same price, the W6700 is a great way to go.

2
TOP FIVE PCs

IBM ThinkPad R40

Price: \$2,999 **Contact:** IBM **Phone:** 13 24 26

Web: www.ibm.com.au ✓ Brilliant battery life ✓ Centrino platform ✓ Lightweight

The ThinkPad R40's awesome battery life of four hours and 14 minutes and Centrino platform nabbed it the number three spot. The R40 features Intel's 1.3GHz Pentium-M processor, the slowest clock speed of the new processor models, but its Office XP performance was significantly better than the Notino W6700's 2GHz Pentium 4 chip. Its 3D gaming isn't a high point, with the built-in Radeon graphics only hitting 60fps on Quake III at 640 by 480-pixel resolution. Being a Centrino notebook, this one also includes built-in WiFi wireless networking. At 2,591g, the R40 is only fractionally heavier than the Inspiron 500m, but has an extra hour of battery life. The 14.1in active matrix screen looks better than the TravelMate 284XC, yet features the same basic 1,024 by 768-pixel resolution. Despite only including a DVD-ROM drive, the R40 also features an S-Video output port, making it suitable for DVD/home entertainment use. This is an excellent option for business users looking for maximum battery life and lowest weight without compromising on performance. The R40 loses against the Inspiron 500m on both Office XP and multimedia/

3
TOP FIVE PCs

content creation applications, but more than an hour of extra battery life never hurts. Definitely a must-see.

Acer TravelMate 284XC

Price: \$2,999 **Contact:** Acer Computer Australia

Phone: 1300 366 567 **Web:** www.acer.com.au ✓ CD-RW/DVD-ROM drive ✓ 512M DDR RAM ✓ Fast 30G hard drive

The new TravelMate 284XC is an improvement over the previous 283XC model. It has a 14.1in active screen, a 2.2GHz Pentium 4-M processor and 512M of memory. It produced the same performance level on multimedia/content creation applications as the Inspiron 500m, which with an extra 256M, would have taken the lead. Unfortunately, there is no FireWire or S-Video output, but the integrated Intel graphics pushed Quake III to 98.4fps at 640 by 480-pixel resolution. The inclusion of QSI's SBW-242 CD-RW/DVD-ROM drive bulks up the value, and Acer is the only brand name we've seen to offer this on a sub-\$3,000 notebook. The 30G hard disk drive is quite quick at 4,180Kps average data transfer speed, and battery life wasn't too bad at two hours and 24

4
TOP FIVE PCs

minutes. Weight was also on the right side of 3kg. The 284XC is a competent notebook for the price, but consider the three models ahead of it first.

Pioneer Soho D400S

Price: \$2,999 **Contact:** Pioneer Computers **Phone:** (02)

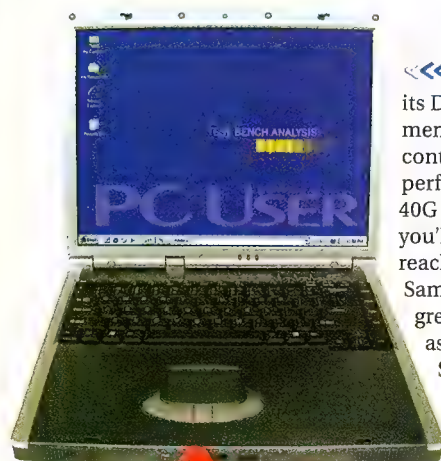
9690 2888 **Web:** www.pioneercomputers.com.au

✓ Fastest multimedia/content creation performer
✓ CD-RW/DVD-ROM ✓ 40G hard drive

The other four units in this 'Top five' chose the finesse of mobile processors, but Pioneer went for the 'bull in a china shop' approach, using Intel's 2.8GHz desktop Pentium 4 processor in >>>

MISSING IN ACTION

We approached about a dozen notebook vendors for this month's Top Five Notebooks, but as with last month's feature, a number, including Hewlett-Packard, either could not or would not supply evaluation product. Without the ability to test and evaluate their systems, we cannot recommend sub-\$3,000 notebooks from these brands. Note that we try to review as many notebooks as possible for our top five feature, but we can't cover everything due to time and space restrictions. If you have or know of a PC brand that you would like us to cover, send an email to pcusertop5@acp.com.au with contact details, and we'll do our best to review PCs/notebooks from that vendor at a later date.



its D400S notebook. Aided by 256M of DDR memory, the D400S topped our multimedia/content creation application tests and performed well on the Office XP tests. The 40G Fujitsu hard disk drive is as generous as you'll see at this price and it's no slouch either, reaching 4,420Kps data transfer speed. The Samsung SN-324B CD-RW/DVD-ROM drive greatly increases the versatility of the D400S, as does the inclusion of both FireWire and S-Video output. However, using a desktop processor has two distinct disadvantages if you're considering a notebook for portable use: you generally end up with

awful battery life and a heavy package to carry. Unfortunately, the D400S meets both of these, with less than two hours of battery life and pushing 3.5kg — 4kg if you add in the power brick and cable. If you're looking for the desktop replacement factor and size isn't an issue, the Acer Aspire 1700 DeskNote we reviewed in the June issue is a much better bet with its 17in screen and faster all-round performance. However, the Aspire 1700 lacks a battery, so the D400S roars back into contention on that basis — one hour and 47 minutes of battery life is better than nothing. All up, lots of features and tons of performance gets this one into the last spot in the top five.



JUST MISSED THE CUT

Fujitsu LifeBook C-2210

Price: \$2,999 **Contact:** Fujitsu PC Australia **Phone:** 1800 288 284 **Web:** www.lifebook.com.au

A reasonable attempt, but not strong enough to break into the top five. The C-2210 featured a relatively slow 1.8GHz Pentium 4M processor, and its Office XP performance was no better than the Satellite 1130 from Toshiba. FireWire and S-Video out ports, and a 40G hard disk drive help, but the poor 100-minute battery life and hefty 3,694g weight don't.

Toshiba Satellite 1130

Price: \$2,310 **Contact:** Toshiba **Phone:** 13 30 70 **Web:** www.isd.toshiba.com.au

It's an unusual day when Toshiba misses the cut in a notebook test, but the Satellite 1130, even at the low price of \$2,310, doesn't do enough. A 1.8GHz mobile Celeron processor, DVD-ROM drive only and comparatively poor all-round performance makes this one hard to recommend if you have a budget of \$3,000 to play with. **PCU**

HOW WE TESTED

Every system submitted was tested using the following benchmarks.

- VeriTest's Business Winstone 2002 1.0.1. This benchmark tests real performance with Office XP, Lotus Notes R5 and other similar office-based applications.

- VeriTest's Multimedia Content Creation Winstone 2003. This benchmark tests real-world application performance on a range of current multimedia titles, including Photoshop 7 and Adobe Premiere.

- VeriTest's WinBench Business WinMark 99. This test checks the speed of the hard disk drive. A fast hard disk drive is important for overall system performance, as well as digital video capture.

- VeriTest's BatteryMark 4.0.1. This benchmark tests the battery life of each model, running it through a series of screen, processor and hard disk drive tests, while keeping track of the running time.

- Quake III demo001. We use this test to measure the 3D graphics performance, measured at 640 by 480-pixel/16-bit colour resolution.

In all cases, higher scores are better. In rating each unit, due weighting is given to the features and price, as well as the performance results.

Please note that VeriTest has not verified these test results and makes no warranty for them.

TOP FIVE SUB-\$3,000 NOTEBOOKS: HOW THEY COMPARE

	DELL INSPIRON 500M	HIGRADE NOTINO W6700	IBM THINKPAD R40	ACER TRAVELMATE 284XC	PIONEER SOHO D400S
Ranking	1	2	3	4	5
Price	\$2,999	\$2,999	\$2,999	\$2,999	\$2,999
SPECIFICATIONS					
Processor	1.4GHz Intel Pentium-M	2GHz Intel Pentium 4-M	1.3GHz Intel Pentium-M	2.2GHz Intel Pentium 4-M	2.8GHz Intel Pentium 4 desktop
Memory	256M DDR	256M DDR	256M DDR	512M DDR	256M DDR
Screen	14.1in TFT	15.2in TFT widescreen	14.1in TFT	14.1in TFT	14.1in TFT
resolution	1,024 by 768	1,280 by 854	1,024 by 768	1,024 by 768	1,024 by 768
Graphics controller	Intel 8255GM integrated	nVidia GeForce4 440 Go	ATI Mobility Radeon	Intel 82845G integrated	SIS M650 integrated
Hard disk drive	40G IBM IC25N040	20G Hitachi DK23EA-20	20G Hitachi DK23EA-20B	30G IBM IC25N030	40G Fujitsu MHS2040AT
Optical drive	LG GDR-8081N DVD-ROM	Matsushita CW-8121 CD-RW/DVD-ROM slot-loading	Matsushita SR-8177 DVD-ROM	QSI SBW-242 DVD-ROM/CD-RW	Samsung SN-324B CD-RW/DVD-ROM
FireWire	No	Yes	No	No	Yes
S-Video	Yes	Yes	Yes	No	Yes
Wireless networking	Yes	No	Yes	No	No
Weight (grams)	2,469	2,867	2,591	2,927	3,421
TEST RESULTS					
VeriTest Business Winstone 2002	25.9	18.9	21.8	23.2	23
VeriTest Multimedia Content Creation 2003	30	26.5	25.9	30	32.9
VeriTest Business Disk WinMark 99	4940	3240	3150	4180	4420
VeriTest BatteryMark 4.0.1	Two hrs and 59mins	Three hrs and five mins	Four hrs and 14mins	Two hrs and 24mins	One hr and 47mins
Quake III demo001 640 by 480/16-bit	105.1	177.4	61.5	98.4	78.7
Note: Higher scores are better					

THE POSSIBILITIES ARE INFINITE

FUJITSU

Slim and Wireless with Modular Bay



Modular bay is hot swappable with optical disk drives, USB FDD bay unit, PC card slot, 2nd battery and weight saver

Sophisticated - LifeBook S6120

Intel® Centrino™ Mobile Technology

- Intel® Pentium® M processor 1.60/1.40GHz • Intel® PRO/Wireless 2100 Network Connection
- Intel® 855GM Chipset • Hot Swappable Modular Bay • Wi-Fi Connectivity
- Microsoft® Windows® XP Pro

Fujitsu. *Infinitely Wireless*

L I F E B O O K

Made in Japan. World Class.

lifebook.com.au | 1800 288 283

FUJITSU PC AUSTRALIA

Registered business name of Fujitsu PC Asia Pacific Pte Ltd ARBN 098 263 195

Fujitsu recommends Microsoft® Windows® XP Professional for Mobile Computing

Wireless connectivity and some features may require you to purchase additional software, services or external hardware. Availability of public wireless LAN access points limited. System performance measured by MobileMark® 2002. System performance, battery life, wireless performance and functionality will vary depending on your specific hardware and software configurations. Intel, Pentium, Intel Inside logo, and Intel Centrino are registered trademarks or trademarks of Intel Corporation or its subsidiaries in the United States and other countries. Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. All product information is correct at time of printing.

FJT0078



MOBILE
TECHNOLOGY

The perfect-value PC



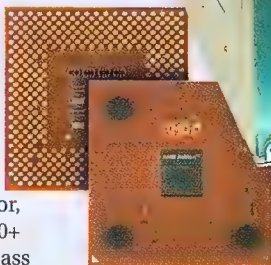
Looking for the best-value configuration for a PC? Here are our Top Buy PC components and other products.

processor

AMD Athlon XP 2400+

With improved performance over its predecessor, the Athlon XP 2100+ continues to outclass the 2.4GHz Pentium 4 on Office and content creation applications, with games performance almost identical.

Reviewed: May 2002 **Price:** About \$235
Contact: AMD **Phone:** (02) 8877 7222
Web: www.amd.com

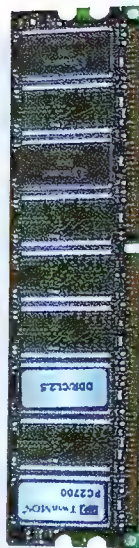


memory

512M of PC2700 DDR

You could settle for 256M of RAM, but if you're running Windows XP or 2000, you'll get much more life out of your system with 512M. DDR333 (PC2700) memory offers the best value, but make sure it works with your motherboard.

Price: About \$270



motherboard

ASUS A7N8X Deluxe

Based on nVidia's nForce2 chipset, this is the fastest board we've tested for AMD's Athlon XP platform. It roars with the Athlon XP 2800+, but it still works well with the XP 2000+. It comes with tons of features, including DDR333 memory, AGP8X support and integrated 5.1 audio.

Reviewed: February 2003
Price: \$329 **Contact:** Achieva
Phone: (02) 9742 3288
Web: www.asus.com.tw



hard disk drive

Hitachi 120GXP Deskstar 80G

If you're looking for value for money, this 7,200rpm ATA/100 hard drive is fast, with plenty of capacity.

Reviewed: March 2003
Price: \$225 **Contact:** Hitachi
Phone: 1800 032 689
Web: www.hgst.com



cd-r/rw drive

Lite-On LTR4824

This internal CD-R/RW drive from Lite-On offers exceptional performance at a great price.

Reviewed: April 2003
Price: \$89 **Contact:** Synnex
Phone: 1300 880 038
Web: www.liteonit.com





**My office needs desktop PC's
with over 3GHz of power.**

And a 17" monitor.

Oh, and a CD-RW.

**For under \$2,000 would
be nice too.**

Keep dreaming.

Acer



Power is the word. The AcerPower ST desktop gets its 3.06GHz of power from the Intel® Pentium® 4 Processor, which means enough grunt to support future applications requiring that extra kick. Onto features, the AcerPower ST has a 17" monitor for brilliant presentation and viewing and a bonus CD-RW. Now for the price. While this incredible desktop normally costs \$3,321, we've chopped that by 33% to just \$1,999. Still dreaming?



\$1,999 RRP inc GST

Acer

www.acer.com.au

1300 366 567

Authorised Dealers

Acer recommends Microsoft® Windows® XP Professional for Business.

Intel, the Intel Inside Logo and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. ©2003 Acer, Inc. All rights reserved. Acer and the Acer logo are registered trademarks and AcerPower is a trademark of Acer Inc. Product prices and specifications are subject to change without prior notice.

W5Group ACE199/PCU

acer
Empowering People

HOW WE CHOOSE
THE COMPONENTS

We've been asked many times: 'What specifications should I look for in a PC?' Well, here are our recommendations. Rather than choose the best performing components, we've selected the best value, based on price, features and performance. We've also chosen components that will work together; for example, ensuring that the motherboard will work with our Top Buy processor and memory. The end result is the 'perfect value' system for most users. It may not be perfect for everyone, but our aim is to put together a system that would probably cost about \$2,500 — possibly more or less, depending on the brand. However, we've also added some 'high-performance options' for those who want better features, such as superior 3D games performance. Follow this guide and buy from a good, reputable PC maker, and you'll end up with a very fast PC that's suitable for just about any task.



soundcard

Creative Sound
Blaster Extigy

The Extigy is an external box that has built-in Dolby Digital processing. Unbeatable sound quality at the price.

Reviewed: December 2002
Price: \$399 **Contact:** Creative Labs **Phone:** (02) 9666 6100
Web: www.australia.creative.com

OTHER TOP BUYS

desktop replacement

Acer Aspire 1700 DeskNote

It may look like a notebook, but the DeskNote is effectively a desktop computer in a portable format. There's a full 4:3 ratio 17in TFT screen, 80G hard drive and CD-RW/DVD-ROM combo drive. An innovative and great-value system.

Reviewed: June 2003 **Price:** \$2,999

Contact: Acer Computer Australia

Phone: 1300 366 567 **Web:** www.acer.com.au



tft monitor

Cornea MP704

This is the cheapest 17in TFT monitor we've seen. With a native resolution of 1,280 by 1,024 pixels, the screen is bright, clear and sharp, with a good peripheral viewing angle.

Reviewed: June 2003 **Price:** \$799

Contact: PCAdvantage **Phone:** 1300

136 353 **Web:** www.pcadvantage.com.au

kids' software

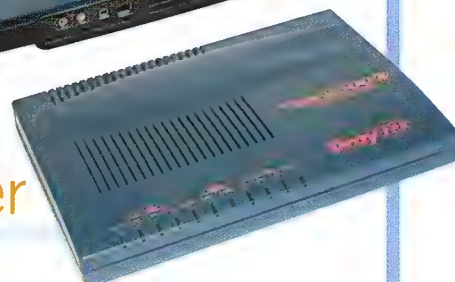
I Spy: School Days

We love the I Spy series here at *PC User* and this is no exception. Based on a classroom theme, there are nine different sections of puzzles to complete, aimed at developing your children's language and lateral thinking skills.

Reviewed: June 2003 **Price:** \$29.95

Contact: Scholastic Australia **Phone:** (02) 4328

3555 **Web:** www.scholastic.com/ispy **PC U**

adsl
routerDrayTek
Vigor2600W ADSL Router

With a built-in ADSL modem, 802.11b wireless access point, strong security and 64/128-bit WEP encryption, this is the cheapest and easiest way to share an ADSL connection wirelessly.

Reviewed: June 2003 **Price:** \$429 **Contact:** Network

Broadband Solutions **Phone:** (02) 9212 2838

Web: www.draytek.com.tw

dvd duplication

Pinnacle Instant Copy

This allows you to easily back up your DVD home movies. It allows you to copy the entire contents of the DVD onto a single 4.7G DVD recordable disc, as well as convert to VCD or Super VCD formats.

Reviewed: June 2003

Price: \$159 **Contact:**

Pineapplehead Distribution

Phone: 1800 657 601 **Web:** www.pinnaclesys.com



graphics card

X-Micro Impact T4200 64M

nVidia's GeForce4 Ti4200 offers the most bang per buck for a graphics chip, and this X-Micro Impact is the best of those currently available. There are no frills, but you won't get better 3D games performance for under \$300. Unlike some cheaper nVidia chips, the Ti4200 has DirectX 8.1 compatibility, ensuring you get the best quality from the latest games.

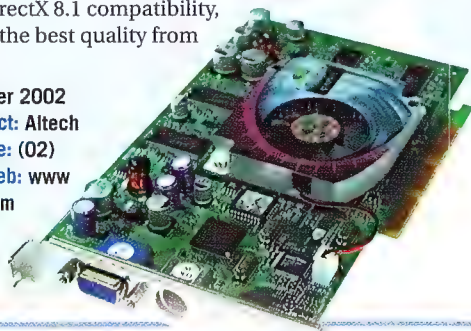
Reviewed: December 2002

Price: \$270 **Contact:** Altech

Computers Phone: (02)

9748 2233 **Web:** www

.x-micro.com



monitor

NEC V930

Why make do with a smaller monitor when you can have a great 19in CRT monitor for under \$500! NEC's V930 offers the best combination of image quality, refresh rates, features and value that we've seen in a monitor.

Reviewed: February 2003 **Price:** \$499

Contact: NEC **Phone:** 13 16 32

Web: www.nec.com.au



High-performance options

processor

Intel 2.66GHz Pentium 4

If you're a keen gamer wanting great 3D performance, then the 2.66GHz model is the best-value P4 around.

Price: \$465 **Contact:** Intel

Phone: (02) 9937 5800

Web: www.intel.com.au



motherboard

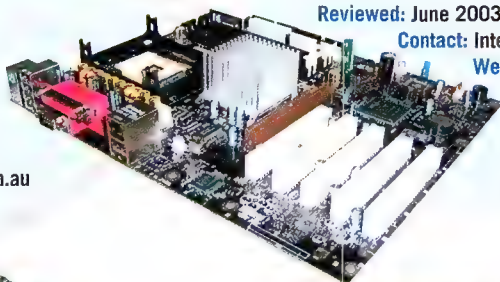
Intel D875PBZ

Intel's new high-performance motherboard features RAID, AGP8X and supports the latest C class Pentium 4 processors.

Reviewed: June 2003 **Price:** TBA

Contact: Intel **Phone:** (02) 9937

Web: www.intel.com.au



speakers

Logitech Z-340

Attractive, solidly built and rated at 33W (RMS) in total, this 2.1 speaker system produces great quality sound.

Reviewed: December 2002

Price: \$119.95 **Contact:** Logitech

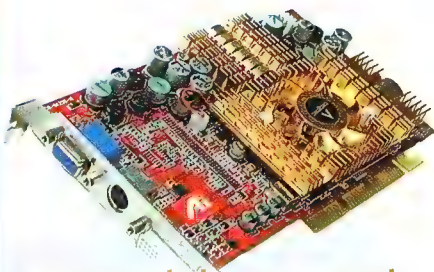
Phone: (02) 9972 3711

Web: www.logitech.com



graphics card

If you're after a fast graphics card, we recommend you hold back for a month until we've tested more GeForce FX cards. In the meantime, if you can't wait, ATI's Radeon 9700 is the best bet at the moment.



dvd burner

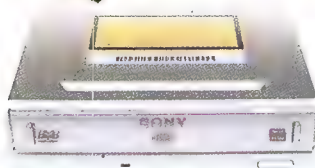
Sony DRU-500A

Why settle for a CD burner when this DVD burner will do just about everything: DVD+R/RW, DVD-R/RW, CD-R and CD-RW?

Reviewed: December 2002 **Price:** \$899

Contact: Sony **Phone:** 1300 137 669

Web: www.sony.com.au



hard drive

Western Digital Caviar WD2000JB 200G

This 7,200rpm ATA/100 drive blitzed the field in our performance tests. Seriously big and fast.

Reviewed: March 2003 **Price:** \$699

Contact: Western **Phone:** (03) 9543 7733

Web: www.westerndigital.com





**I need a notebook with a
two hour repair service warranty.**

For most businesses, down time is costly. That's why we provide a unique 2 hour Commitment Warranty Express Service** on all Acer notebooks - such as the TravelMate 284XC powered by the Mobile Intel® Pentium® 4 Processor - M. Simply take your notebook to any Acer repair centre in Australia or New Zealand** and we guarantee to have you up and running again in 2 hours or less. Acer is the only PC vendor to offer this service.



**I like to configure my
own solutions.**

It's easy to build your own computer with Acer. Simply go to www.acer.com.au, click on ShopAcer, and select the Acer product closest to your requirements. Then, choose from a range of options using the drop down menus to build the ideal customised solution for you. An on-line glossary explains each upgrade in plain English, so you can't go wrong. When you're finished, you can buy online, over the phone or save your configuration and take it to your nearest authorised dealer.



**My company needs
back-up 24 x 7.**

If you purchase an Acer server such as the Altos G300 powered by the Intel® Pentium® 4 Processor, it is backed by Acer's 24 x 7 service hotline. So, in the unlikely event that you do encounter a problem, you can call anytime and one of our experienced technicians will help work through the problem with you on the spot.

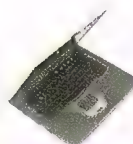




All-in-one Business Notebook



All-in-one Performance Notebook



Intel® Centrino™ Mobile Technology

TravelMate 234X

BONUS CARRY CASE!
UPGRADE TO MICROSOFT® WINDOWS® XP PROFESSIONAL
FOR \$150 RRP INC GST!
ADD MICROSOFT® OFFICE XP SBE FOR \$300 RRP INC GST!
Mobile Intel® Celeron® Processor 2.2GHz
14.1" active colour screen
128MB DDR SDRAM
20GB hard disk drive, 24 x CD-ROM
1.44 floppy disk drive
Internal 56K modem + broadband ready 10/100 LAN
Microsoft® Windows® XP Home
2 Hour Commitment Warranty Express Service**

\$1,999

RRP inc GST from \$16.69 per week*
Please quote e-Code TM2319

TravelMate 284XC

BONUS CARRY CASE!
UPGRADE TO MICROSOFT® WINDOWS® XP PROFESSIONAL
FOR \$200 RRP INC GST!
ADD MICROSOFT® OFFICE XP SBE FOR \$300 RRP INC GST!
Mobile Intel® Pentium® 4 Processor 2.2GHz - M
14.1" active colour screen
256MB DDR SDRAM
30GB hard disk drive
8 x DVD + 24 x 10 x 8 x CD-RW
1.44 floppy disk drive
Internal 56K modem + broadband ready 10/100 LAN
Microsoft® Windows® XP Home
2 Hour Commitment Warranty Express Service**

\$2,699

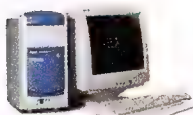
RRP inc GST from \$22.53 per week*
Please quote e-Code TM2811

TravelMate 800Xci

BONUS CARRY CASE & 32MB USB HANDYDRIVE!
3 MONTH UNLIMITED BROADBAND WIRELESS ACCESS TO
SKYNETGLOBAL™ IN AUSTRALIA!
Intel® Centrino™ mobile technology
Intel® Pentium® M processor 1.3GHz
Intel® 855PM Chipset
Intel® PRO/Wireless Network Connection 802.11b
14.1" active colour screen
256MB DDR SDRAM, 40GB hard disk drive
8 x DVD + 24 x 10 x 8 x CD-RW
Firewire & S-video, USB 2.0
Integrated Smart Card security
Internal 56k modem + 10/100 LAN - Broadband internet ready
4-in-1 multi memory card reader
Microsoft® Windows® XP Professional
2 Hour Commitment Warranty
Express Service**

\$3,999

RRP inc GST from \$33.39 per week*
Please quote e-Code TMC800



Great low price!

Great value desktop



Top value desktop



Great value desktop

AcerPower ST

Intel® Celeron® Processor 2.2GHz
256MB DDR SDRAM
20GB hard disk drive
52 x 24 x 52 x CD-RW
Integrated AC '97 audio
Integrated 10/100M LAN - Broadband internet ready
Ultra AGP II video technology (AGP 8x equivalent for
3D/2D video applications)
Microsoft® Windows® XP Home
Microsoft® Works 7.0
Acer 17" monitor
1 year on site warranty

\$1,199

RRP inc GST from \$10.01 per week*
Please quote e-Code STB006

AcerPower ST

Intel® Pentium® 4 Processor 3.06GHz
256MB DDR SDRAM
40GB hard disk drive
52 x 24 x 52 x CD-RW
Integrated AC '97 audio
Integrated 10/100M LAN - Broadband Internet ready
Ultra AGP II video technology (AGP 8x equivalent for
3D/2D video applications)
Microsoft® Windows® XP Professional
Acer 17" monitor
1 year onsite warranty

\$1,999

RRP inc GST from \$16.69 per week*
Please quote e-Code STB007

AcerPower ST

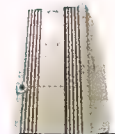
UPGRADE TO MICROSOFT® OFFICE®
XP PROFESSIONAL FOR \$161 RRP INC GST!
Intel® Pentium® 4 Processor 2.4GHz
512MB DDR SDRAM, 60GB hard disk drive
52 x 24 x 52 x CD-RW, Integrated AC '97 audio
Integrated 10/100M LAN - Broadband internet ready
Ultra AGP II video technology (AGP 8x equivalent for
3D/2D video applications)
Microsoft® Windows® XP Professional
Microsoft® Office XP SBE
Acer 15" LCD monitor
1 year on-site warranty

\$2,499

RRP inc GST from \$20.87 per week*
Please quote e-Code STB004



Performance and value server



Maximum scalability server



Power and performance server

Altos G300

ADD MICROSOFT® WINDOWS2000 SERVER FOR
ONLY \$1,299 RRP INC GST!
Intel® Pentium® 4 Processor 2.0GHz
256MB ECC DDR RAM
Dual Channel IDE RAID controller
3 channel integrated IDE controller
Integrated Intel® Gigabit ethernet controller
52 X CD-ROM
280 watt power supply
3 year on-site warranty with 24 x 7 hotline support

\$1,399

RRP inc GST from \$11.68 per week*
Please quote e-Code AAG3401

Altos G510

ADD MICROSOFT® WINDOWS2000 SERVER FOR
ONLY \$1,299 RRP INC GST!
Intel® Xeon™ Processor 2.0GHz
Dual processor capable
512MB ECC DDR RAM
1 x 36GB Ultra 320 SCSI hard disk drive
Integrated 10/100/1000 ethernet controller
54 X CD-ROM
1 x 450 watt hotswap power supply
3 year on-site warranty with 24 x 7 hotline support

\$3,999

RRP inc GST from \$33.35 per week*
Please quote e-Code AAG5341

Altos G700

ADD AN ADDITIONAL 36GB SCSI DISK DRIVE FOR ONLY \$620!
ADD MICROSOFT® WINDOWS® 2000 SERVER FOR ONLY \$1,299!
Intel® Xeon™ Processor 2.0GHz
Dual processor capable
512MB ECC DDR RAM
1 x 36GB Ultra 320 SCSI hard disk drive
Integrated 10/100/1000 ethernet controller
54 X CD-ROM
1 x 450 watt hotswap power supply
3 year on-site warranty with 24 x 7 hotline support

\$4,899

RRP inc GST from \$40.90 per week*
Please quote e-Code AAG7341

Acer recommends Microsoft® Windows® XP Professional for Business.

Intel, the Intel Inside Logo, Pentium, Intel Centrino, Celeron and Intel Xeon are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries. ©2000 Acer, Inc. All rights reserved. Acer and the Acer logo are registered trademarks and AcerPower, TravelMate, and Altos are trademarks of Acer Inc. Product specifications and recommended retail prices are subject to change without prior notice. All other products, brand names, company names and logos are trademarks of their respective companies. Pictures are for illustrative purposes only.

**Terms and conditions apply - warranty locations also available on website. See www.acer.com.au for full details. †Valid until 9 July 2003 or while stocks last. *Rental amounts shown are indicative and based upon a 36-month rental contract and rates at time of publication; all state and federal government charges (Stamp Duty & GST) included. Rental figures quoted are for business use only and require a minimum purchase of \$2000 ex GST. All rentals are subject to credit approval. Provided by Acer Finance Australia Pty Ltd. Individual dealers may offer alternative financing options.

W5 Group ACE199/PCU

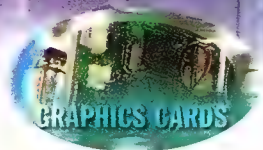
shopAcer

www.acer.com.au

1300 366 567

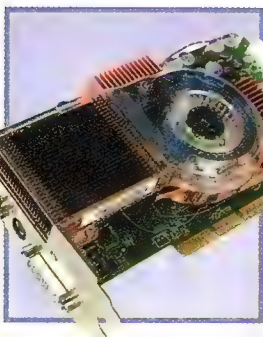
Authorised Dealers

acer
Empowering People



New graphics cards are flowing into PC User Labs thick and fast.

Darren Yates puts them through their paces.



nVidia's new budget cards

Hercules 3D Prophet 9800 Pro

RATING **6** Price: \$999 Contact: Guillemot Phone: (02) 8303 1818 Web: www.hercules.com

Guillemot's new top-drawer graphics card features ATI's latest Radeon 9800 Pro graphics chip and adds in 128M of DDR memory and DirectX 9.0 support. It doesn't reach the high 400 frames per second (fps) of most new GeForce FX cards, but it leaves the non-Ultra version of the FX 5800 behind at the highest 1,280 by 1,024-pixel resolutions. Below that, it's still catching up. This is an overclockers' dream, with decent heatsinking on all memory chips. It doesn't

run as hot as the latest GeForce FX 5800 Ultras and it's not as loud as the original FX dual-slot fans. The chip hits a 380MHz clock speed, with the memory running at 340MHz DDR (680MHz effective), but in terms of value, \$999 is a big ask, particularly with no VIVO option. PowerDVD XP 4.0 will crank your DVD movies into gear, but so will a \$99 DVD player. The 9800 Pro is fast and stable, but at \$999, it's only for mad gamers with money to burn.



ABIT Siluro FX5800 DOTH

RATING **7** Price: \$830 Contact: Altech Computers Phone: (02) 9735 5655 Web: www.abit.com.tw

With nVidia replacing the GeForce FX 5800 with its

new FX 5900 (see page 110), you won't find many of these cards. But it's a good, quick card. On Quake III, the FX 5800 leads the 9800 Pro right up to 1,024 by 768-pixel/32-bit colour resolution, but beyond that,

GRAPHICS CARDS: HOW THEY COMPARE

	HERCULES 3D PROPHET 9800 PRO	ABIT SILURO FX5800 DOTH	ALBATRON GIGI FX5200P	SPARKLE SP8831	POWERCOLOR RADEON 9800 PRO	MSI FX5600	MSI FX5200	LEADTEK WINFAST A250 ULTRA
Graphics chip	ATI Radeon 9800 Pro	nVidia GeForce FX 5800	nVidia GeForce FX 5200	nVidia GeForce FX 5600	ATI Radeon 9800 Pro	nVidia GeForce FX 5600	nVidia GeForce FX 5200	nVidia GeForce4 Ti4600
Memory	128M DDR	128M DDR	128M DDR	128M DDR	128M DDR	128M DDR	128M DDR	128M DDR
AGP speed	AGP8X	AGP8X	AGP8X	AGP8X	AGP8X	AGP8X	AGP8X	AGP4X
Driver version	6.14.1.6307	43.45	43.45	43.45	6.14.1.6307	43.45	43.45	43.45
TEST RESULTS								
Quake III - 640 by 480/16-bit	367.7	408.6	370.5	403.8	365.4	402.5	368.2	394.7
Quake III - 640 by 480/32-bit	368.3	406.9	345.7	398.9	369	396.5	349.4	394.4
Quake III - 1,024 by 768/16-bit	359.6	376.5	209.1	284.9	359.5	284	208.4	333.1
Quake III - 1,024 by 768/32-bit	358.9	364	191.2	269.1	358.6	268.6	190	314.4
Quake III - 1,280 by 1,024/16-bit	326.5	307.6	131.8	185.9	326.7	185.9	131.5	248.1
Quake III - 1,280 by 1,024/32-bit	312.9	282.2	120	173.1	315.9	173	119.2	225.8
*UT2003 640 by 480 (average)	206.5	192.9	141.6	185.7	205.7	186.1	141.1	204.8
*UT2003 640 by 480 (low score)	95.3	80.5	57.9	81.3	96.8	71	52.3	92.1
*UT2003 1,280 by 1,024 (average)	164.3	141.4	46.1	73.2	165.3	73.1	46	111.6
*UT2003 1,280 by 1,024 (low score)	87.3	50.7	25	43.9	71.3	42.4	26.4	55.3
NOTE: Tested using 3GHz Pentium 4, ABIT IC7-G motherboard, Windows XP Pro, 40G IBM DeskStar 7,200rpm ATA/100 hard disk drive * tested with DirectX and HiQ settings								

the Radeon takes over. However, on more recent games such as Unreal Tournament 2003, the 9800 Pro is a faster card across the board. That said, we prefer the rendering quality of the GeForce FX — the Radeon cards at 16-bit on most games appear quite grainy and visually disturbing. The card features the basic DVI (digital video interface), VGA and S-Video ports, and again, no VIVO. The double slot size is still

a concern, but the fan is noticeably quieter than the shockers on the first FX 5800 Ultra cards. Compared to nVidia's previous class-leading GeForce4 Ti4600, the performance of the FX 5800 across all games only pokes through at 1,280 by 1,024-pixel resolution. Run any DirectX 8.1 game on this new card at lower resolution and I doubt you'll tell the difference.

Albatron Gigi FX5200P

RATING  **Price:** \$165 **Contact:** Australia IT **Phone:** (03) 9543 5855 **Web:** www.albatron.com.tw

nVidia's new budget GeForce FX 5200 is like a GeForce MX440 with DirectX 9.0 support. The FX5200P is tiny — a single AGP slot in size and only a heatsink on the main GPU. It may have cinematic effects, but this isn't the card you want if you're a serious gamer. At 640 by 480-pixel resolution on Quake III, the card

flies at over 345fps, but push it harder and it quickly drops to 120fps at 1,280 by 1,024-pixel/32-bit resolution. However, the card almost stops on Unreal Tournament 2003 at that same setting — an average of 46.1fps with a low spot of just 25fps, which doesn't augur well for DOOM III. The card includes DVI, VGA and S-Video outputs, but forget overclocking — there are no heatsinks on the memory chips. The one thing in its favour is its sub-\$200 price.

Sparkle SP8831

RATING  **Price:** 128M version, \$294; 256M version, \$319 **Contact:** Australia IT **Phone:** (03) 9543 5855 **Web:** www.sparkle.com.tw

This is our first look at the new FX 5600 midrange GPU from nVidia and it's the first to incorporate VIVO alongside its DVI and VGA ports. The FX 5600 (this non-Ultra version) performs similarly to the AGP8X version of the GeForce4 Ti4200. However, on Quake III, the frame rate dropped by more than 130fps between

640 by 480-pixel/32-bit colour and 1,024 by 768-pixel/16-bit colour. At our top resolution of 1,280 by 1,024-pixel/32-bit colour, the FX 5600 is 50fps faster than the FX 5200, but 110fps behind the FX 5800. Unreal also showed the FX 5600 to be closer in performance to the FX 5200 than the 5800. The SP8831 comes with CyberLink PowerDirector 2.1 ME video editing software, plus a breakout cable for the combined VIVO port on the back of the card. But at this price, nVidia looks to have come up with a good, if not outstanding, replacement for its current midrange favourite, the Ti4200.

PowerColor Radeon 9800 Pro

RATING  **Price:** \$869 **Contact:** Australia IT **Phone:** (03) 9543 5855 **Web:** www.powercolor.com.tw

Another of the upgraded 9700 Pros, this PowerColor version from Australia IT comes with VIVO functionality. This card is slightly longer than the older 9700 Pro and features the standard larger-sized four-pin molex auxiliary power connector. The memory chips are not heatsinked, so overclocking is not a great idea. This card was fractionally slower than the Hercules version at lower resolutions, but marginally

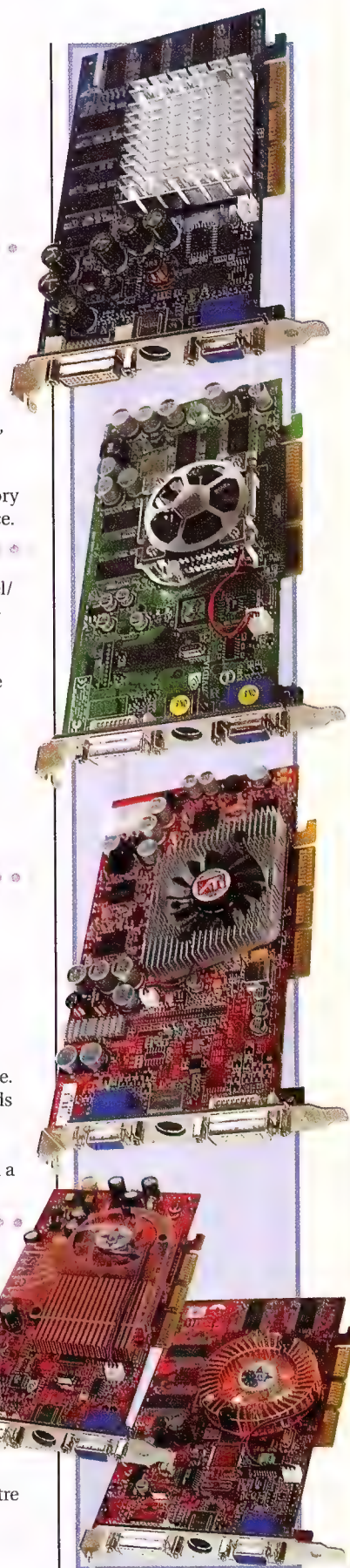
faster at the higher settings. Despite its ability to handle DirectX 9.0 games, I can't see much point in upgrading to this card, particularly at this price and with no DirectX 9.0 games yet available. This card comes with InterVideo WinDVD 4, but despite the VIVO functionality, there's no video capture software. Unlike the original Radeon 9700, all of the 9800 cards we've seen so far have been perfectly stable in our test system, with no bootup or crashing problems. However, at this price, you can pick up an Xbox and a good number of games.

MSI FX5600 and FX5200

RATING  **Price:** FX5600, \$399; FX5200, \$255 **Contact:** MSI Australia **Phone:** (02) 9748 0070 **Web:** www.msicomputer.com.au

MSI's own version of the FX 5200 and FX 5600 non-Ultra cards are quite good value. The FX5200 is more versatile than the Albatron, featuring a built-in fan/heatsink on the GPU. It also comes with VIVO alongside the DVI and VGA ports. Its performance was slightly behind the Albatron on both 3D game tests, but the VIVO option is worthwhile. However, there are no heatsinks on the memory chips. This FX5200 would

be a better option for those looking to get into multimedia, with occasional 3D gaming. The FX5600 also features VIVO, but only part of the heatsink is actually copper. Very similar to the Sparkle SP8831, the MSI FX5600 is a far more generous offering, with loads of software including full-version games Ghost Recon and Duke Nukem: Manhattan Project, and MSI's own MultiMedia Centre software. You even get a decent remote control with batteries thrown in. I'd say the cheaper Sparkle card would be the better option. **PCU**





AMD attacks on two fronts

While Intel basks in its Centrino platform, rival AMD launches its first 64-bit processor and ups the Athlon XP to 3200+. **Darren Yates takes a look.**

After months of delays, updates and further delays, chipmaker AMD has finally released part one of its new 64-bit processing offensive on the IT world. Named Opteron, the 64-bit chip is designed primarily for servers and serious workstations and *PC User* was fortunate enough to get a close look at the chip this month. Moreover, it gives us a glimpse at what we can expect in September when AMD launches Athlon 64, the first 64-bit processor aimed at the consumer desktop.

Our look at Opteron was in a rackmount dual-processor server with a truckload of memory and the two chips running at 1.4GHz. Online sources have shown this dual Opteron configuration to give Intel's 2.8GHz Xeon chips a real run for their money in some applications, and leaving them behind in others.

One of the problems facing AMD's 64-bit strategy, at least for the desktop, is that Microsoft has yet to release even a beta of the 64-bit Windows XP-64 operating system it had promised the chipmaker. And it looks as though Microsoft won't deliver a beta until next month.

AMD could be on a winner, at least for business users, as Athlon 64 and Opteron chips can happily run either 32-bit or 64-bit x86 architecture-based software.



Intel's 64-bit chip, Itanium, relies on completely rewritten code.

AMD has also produced a new chipset, the AMD8000 series, which it describes as the core chipset for both Opteron and Athlon 64 processors. It consists of the AMD-8151 AGP8X graphics port controller, the AMD-8131 PCI-X (PCI-Express) chip and the AMD-8111 input/output (I/O) hub.

The 8151 offers up to 6.4Gps bandwidth and is compliant with AGP2.0 (AGP1X, 2X, 4X) and AGP3.0 (AGP4X and AGP8X). The 8131 supports both new PCI-Express and the current PCI 2.2 slots. It has two bridges,

each supporting five PCI connections for a total of 10, and supports up to 133MHz data transfer. The 8151 handles Fast Ethernet, up to six-channel audio, parallel ATA drives to ATA/133, but no Serial ATA support.

Athlon XP hits 3200+

AMD also launched the next iteration of its Athlon XP desktop processor, now at 3200+. The interesting thing to note is that the clock speed of this new chip is the same as the XP 3000+, namely 2.167GHz.

The 640K of onboard cache memory divided into 128K of level 1 and 512K of level 2 also remains the same. The only real difference — and it's a significant one — is the increase of the frontside bus (FSB) from 166MHz to 200MHz. Given that AMD only just recently increased this from 133 to 166MHz, it's not likely to go down well with those who just upgraded to a new 166MHz motherboard, which doesn't support 200MHz.

We tested the new chip with the supplied ASUS A7N8X Deluxe motherboard and 512M of Corsair XMS3200 DDR memory, but found its performance patchy. The '+' rating system used by AMD is starting to lose the plot a little, given that it's supposedly based on a Pentium 4 chip of equivalent clock speed.

Based on our tests, I don't think the XP 3200+ matches Intel's new 200/800MHz FSB 3GHz Pentium 4C processor. The only place where it continues to lead is in Office XP tests. Beyond that, to multimedia applications and 3D gaming, the new Pentium 4 takes the lead.

For some time now, AMD appears to have run out of clock speed and looks to be relying on frontside bus speed to improve performance. That's a good thing, but now that the FSB has reached 200/400MHz, they'll need to find at least one more clock speed increase to reach XP 3400+, possibly the last Athlon XP chip release before the delayed Athlon 64 arrives. **PCU**

AMD'S ATHLON XP 3200+: HOW IT COMPARES

PROCESSOR	AMD ATHLON XP 3200+	INTEL 3GHZ PENTIUM 4C
Actual clock speed	2,167MHz	3,000MHz
FSB speed	200/400MHz	200/800MHz
Level 1 cache memory	128K	20K
Level 2 cache memory	512K	512K
Operating system	Windows XP	Windows XP
Motherboard	ASUS A7N8X Deluxe	Intel D875PBZ
TESTS		
VeriTest Business Winstone 2002 1.0.1	35.8	32.9
VeriTest MCC Winstone 2003 1.0	39	46.1
Quake III demo001 - 640 by 480/16-bit	313.1	417.2
Quake III demo001 - 1,280 by 1,024/32-bit	277.2	327.9
UT2003 demo - 640 by 480 (average)	202.4	NA
UT2003 demo - 640 by 480 (low score)	70.6	NA
UT2003 demo - 1,024 by 768 (average)	168.5	166.6
UT2003 demo - 1,024 by 768 (low score)	45.2	65.8
NOTE: Unreal Tournament 2003 Demo tested with DirectX at HiQ		



1300 666 330

BROADBAND *Unlimited*

Fast unlimited internet at a fixed price

No download limits

Ability to use telephone while connected

No dial up and phone call charges

"Always on" internet connection

No minimum terms

* FROM

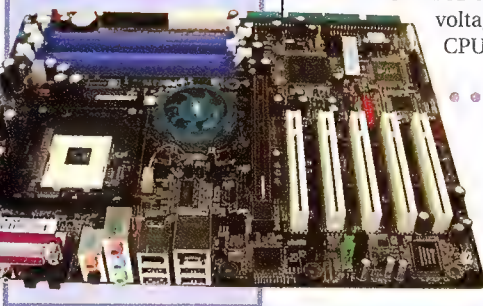
\$64.90
per month
for 256k/64k connection

www.dodo™.com.au
internet that flies

*This price available in Capital Cities only.
Credit card payment monthly in advance plus one-off \$169 connection fee. ADSL Service not available in all areas.



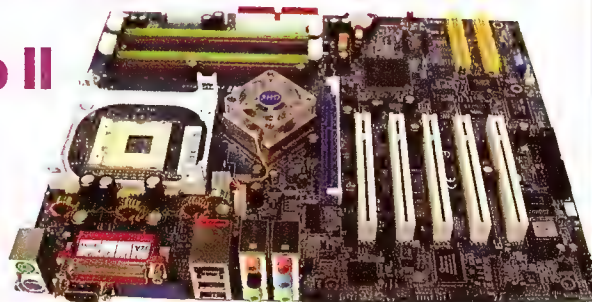
This month,
Darren Yates
tests two
new boards
based on the
Canterwood
and Springdale
chipsets.



Albatron PX865PE Pro II

RATING **Price:** \$297 **Contact:** Australia IT **Phone:** (03) 9543 5855 **Web:** www.albatron.com.tw

This board from Taiwanese vendor Albatron features the new Intel Springdale (i865) chipset, aimed at the mainstream desktop market. As with the previous 845 series, the 865 range consists of the 865PE and 865GE, with the main difference being the 865GE includes Intel's Extreme Graphics integrated graphics controller. Albatron has gone to some lengths to improve the overall value, which on its own would have been good to start with. On top of Intel's Serial ATA hard drive RAID support, AGP8X graphics port and Gigabit Ethernet onboard, Albatron has added a second Promise RAID chip, with both Serial and parallel ATA support. There's also two FireWire ports included. The PX865PE Pro II is one of the first boards we've seen to support up to eight discrete analog audio channels, which it does with six 3.5mm stereo sockets on the back panel. This is also an overclocker's paradise with Albatron claiming over 1GHz FSB speed support, plus incremental voltage adjustments for the AGP slot, CPU and DDR memory. Two things we



weren't keen on were the placement of the floppy drive port, way off into the far-flung distant regions of the board, and the AGP slot's clearance. Testing with Leadtek's WinFast A300 Ultra found us hitting a small ferrite core and capacitor on the motherboard while trying to install the card. We were able to get the card into the slot enough to test it, but it wasn't what you'd call an ideal situation. Most other cards should be reasonably alright. With support for 400, 533 and 800MHz FSB processors, you can plug in any PGA478 chip you like and it will work — we had no trouble with Intel's latest 3GHz Pentium 4C processor. Performance was good, and although not quite up to the i875 Canterwood-chipset ABIT IC7-G, there are enough features and performance here to make this a definite on your list.

ABIT IC7-G

RATING **Price:** \$440 **Contact:** Altech Computers **Phone:** (02) 9735 5655 **Web:** www.abit.com.tw

MOTHERBOARDS: HOW THEY COMPARE

	ALBATRON PX865PE PRO II	ABIT IC7-G
Chipset	Intel i865PE	Intel i875P
Max. memory capacity, speed	4G DDR400	4G DDR400
No. of Serial ATA ports	4	4
RAID levels	0 and 1	0 and 1
TEST SETTINGS		
Processor tested	3GHz C class Pentium 4	3GHz C class Pentium 4
FSB speed	533MHz	800MHz
Memory speed setting default	DDR400	DDR400
TEST RESULTS		
VeriTest Business Winstone 2002	32.5	32.7
VeriTest MCC Winstone 2003	45.6	46.2
Quake III - 640 by 480/16-bit	395.1	411.5
Quake III - 1,280 by 1,024/32-bit	319.6	325
UT2003 - DirectX HiQ - 1,280 by 1,024 (average)	162.6	164.9
UT2003 - DirectX HiQ - 1,280 by 1,024 (low score)	61.6	69.5

This new board from ABIT is functionally very similar to the Albatron board, despite featuring Intel's i875 Canterwood chipset. ABIT has also added extras on top of the Canterwood's feature set, including ATA/133 RAID and built-in FireWire. However, this is a board for multimedia buffs with six-channel analog audio plus built-in TOSLink S/PDIF digital audio in and out ports, supporting up to 24-bit digital audio. It also adds in the Promise Serial ATA RAID controller for up to four drives. However, the standard parallel ATA drive connectors are edge-on to the board itself and may make the installation of IDE cables tricky in smaller boxes. Other than that, the layout is generally good, with adequate clearance around the AGP slot. Five PCI slots and up to eight USB 2.0 ports should give you enough expansion room to sink a battleship, and built-in Gigabit Ethernet should have your data flying about the office environment as well. Despite being Intel's performance chipset, the i875 doesn't seem to shine that brightly here, with its performance levels marginally ahead of the Albatron PX865PE ProII. At this price, there's not enough of a performance or feature advantage to seriously challenge. That said, there's very little this board can't do and everything it does do, it does at good speed. We used Kingmax DDR400 memory on both boards with no trouble at all, but if you intend to run an 800MHz FSB processor in either of these boards, check that the brand of memory you have or intend to purchase is supported first. A good board, but you pay a premium for the 875 chipset. **PCU**

THE JOURNEY STARTS HERE...

Extreme Cooling - Vapochill Case



The Vapochill case is both a CPU cooling system and a "barebone" PC platform on which to configure Power PC systems and high end professional workstations. By using the VapoChill technology to cool standard Intel or AMD CPU's to subzero temperatures (-25 to -15°C), stable clock frequencies can be achieved at 25 - 60% above standard performance.

From **\$1175**



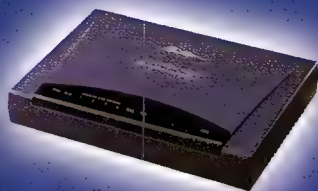
Wireless Router w/ADSL Modem



The Vigor2600WE Wireless ADSL Router with a built in ADSL Modem is the Internet access solution for multiple users of your LAN with countless other value added features such as Firewall security, Advanced VPN, UPnP Support, and Multimedia support. The Vigor 2600WE features a Wireless Access Point, 4 Port Ethernet Switch, and an ADSL Modem/Router.

\$399

4 Port ADSL Modem Router



This 4 Port VPN Firewall Router w/built in ADSL modem comes with a host of features including UPnP support, auto MDI/MDX detection, automatically detects and blocks DoS attacks, URL blocking, packet filtering, SPI. Also supports VPN embedded PPTP client/server, IKE and Ipsec.

\$249

Billion ADSL Modem Router



Combining both an Ethernet and USB port, this ADSL modem can also serve as a router between a home or small office network and the internet. Using Network Address Translation (NAT) and Application-Level Gateway features, it can provide a firewall, protecting PC's on your network. Telstra Approved.

\$179

*Free ADSL Inline filter included with each modem

PC Range carries a wide range of other products including USB 2.0, PC Modifications, Wireless Gear and Networking Gear.

pc range
www.pcrange.com.au

www.pcrange.com.au

Call 08-8322-9544

sales@pcrange.com.au

Reseller and Dealer enquiries welcome.

©2003 PC Range Pty Ltd. All prices are GST inclusive and do not include freight. All Trademarks or trade names are the properties of their respective owners. PC Range is the exclusive distributor of the Billion routers and the Vigor 2600WE in Australia. Prices and specs subject to change without notice. ABN # 56 101 821 407.

SOFTWARE MEGA GUIDE

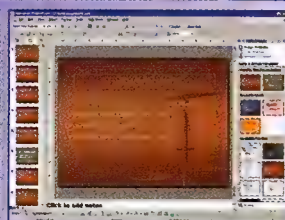
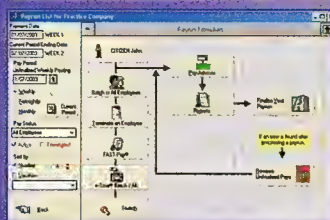
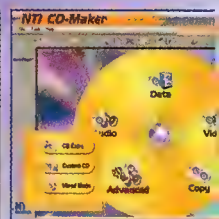
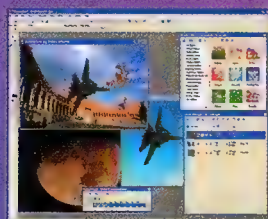
Over 80 home, office and creative applications tested!

With just a few exceptions, most software markets are dominated by one or two players. For instance, if you're buying an office suite, you're probably thinking Microsoft Office. There are very good reasons why these programs are market leaders, but we all have different needs.

Should you blindly follow the pack? In our second annual software mega guide, *PC User's* software reviewers explain when you should go with the leader and when you should consider an alternative. We've even mentioned some freebies to try, all of which you'll find on the cover CD.

Contents

Office suites	41
Presentation programs	43
Email clients and organisers	44
Databases	46
Browsers	47
Image editing	48
Desktop publishing	50
Illustration	52
Multimedia authoring	53
Web authoring	54
Web animation	56
Development platform	57
Video editing	58
DVD and VCD authoring	60
CD burning	61
Small business accounting	103
Personal finance and investment	106
Payroll	108
Point of sale	109
Customer relationship management	110
Project managers	111
Business productivity tools	112



OFFICE SUITES

Microsoft Office XP

RATING Price: Standard, \$1,072; Professional, \$1,288

Contact: Microsoft Phone: 13 20 58

Web: www.microsoft.com.au

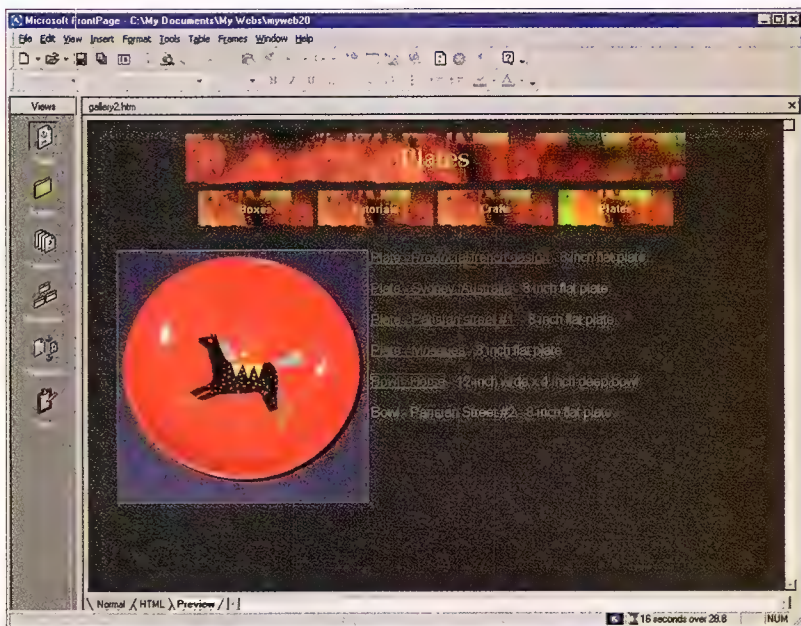
Office suites, along with your email software and browser, are the tools you're most likely to use every day. The suites are designed to provide the type of tools you'll find, and use daily, in any office. Expect them to include a word processor and a spreadsheet at the very least, and some additional combination of applications such as a contact manager, database, publishing program, Web editor, presentation software and even email software. These additional programs vary from suite to suite, and may also vary within a suite, depending on the edition you purchase.

The leading software in this category is Microsoft Office, the suite by which all others are judged. However, ranking below Microsoft Office are a number of suites that have significant followings and, if Microsoft Office didn't exist, would vie strongly for the number one position.

Microsoft Office contains a full complement of applications, and the sheer bulk of features in each application makes it stand head and shoulders above the other suites in this class. In addition, each tool in the suite is strong and leads or comes a close second to the corresponding tool in the other suites, so none disappoint. Microsoft Office, in various versions, has been around many years and the popularity of Office XP is due in part to the high quality and popularity of previous releases such as Office 97.

Why you'd choose another product. The key reason users choose another product is often dissatisfaction with Microsoft the company rather than problems with the suite itself. In addition, some users find the high cost of Microsoft Office, combined with features they will never use, to be a compelling reason to buy a cheaper and less feature-rich alternative. If you're a home user, the customised templates and general 'home user' focus of Microsoft Works, along with its low cost, makes it an attractive alternative. And offices using Lotus Notes appreciate the added integration Lotus SmartSuite provides. Many Corel WordPerfect Office suite users have been loyal buyers since the days of the groundbreaking WordPerfect 5.1 word processor, and stick with the program through familiarity with its interface and fondness for its ability to offer strict user control over formatting, with its Reveal Codes option.

Why you'd keep using it. The applications in Microsoft Office are leaders in their respective software categories. Word is a

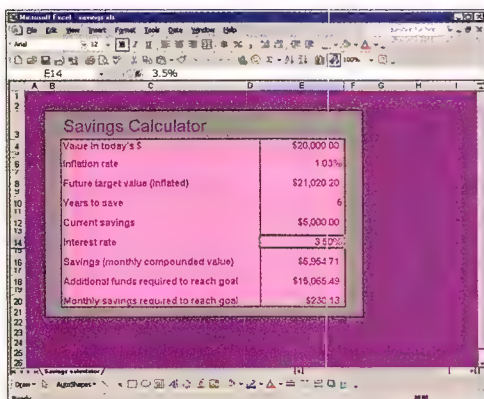


powerful word processor, capable of handling long and graphically intensive documents. Excel leads the field in offering superior calculation tools, numerical data analysis tools, and charts for displaying data. Access is a fully programmable relational database, capable of running anything from a simple mailing list to an enterprise-wide custom client management solution. PowerPoint can create great-looking presentations for delivery on a computer, the Web or for printing on 35mm slides or transparencies. FrontPage is the leading GUI HTML editor and can create fairly sophisticated Web sites, although they tend to all look a bit the same. Publisher, as its name suggests, includes tools and templates for creating a range of home and small business publications, and Outlook combines email handling with contact management, scheduling and other tools for managing personal information.

All the programs in the suite are integrated, so moving data from one to another is easy. Plus, they all share a similar interface, making them easy to learn and use. In addition, features like Themes make it

possible to create a document in Word and a Web page in FrontPage which share the same overall 'look'.

One attractive feature of Microsoft Office is its popularity itself. When a suite is as popular as Microsoft Office, it's easier to find staff who are familiar with it, and books, magazines and courses that teach you how to use it. This in turn feeds its popularity. >>>



WE RECOMMEND

Microsoft Office XP is the pick of the bunch for office users, although Lotus SmartSuite won't disappoint. For home users, Microsoft Works Suite 2003 is a winner because of its low price, large range of templates and great range of applications. In the most bang for (no) buck category, OpenOffice.org is the clear winner.

UPGRADES

Microsoft Office 2003, Lotus SmartSuite Millennium Edition 9.8 and Sun StarOffice 6.2 (upgrades for the programs reviewed here), are all due for release later this year.

OFFICE SUITES



Corel WordPerfect Office 11

RATING **Price:** \$649 **Contact:** Corel Australia **Phone:** 1800 658 850 **Web:** www.corel.com.au

Corel's WordPerfect Office 11 can open and save files in a large range of formats, including Microsoft Office XP and the soon-to-be-released 2003. The word processor, WordPerfect, has a new selectable interface, reminiscent of the old 5.1 for DOS version (including the blue screen) and a document map reminiscent of that in Microsoft Word. The PerfectExpert gets new users started by offering a range of tasks they can select from, but it's not up to the standard of Microsoft Works' Task Launcher. You can export files in the Adobe PDF format and use the batch conversion tool to convert multiple files at once. The suite also includes Presentations, the presentation software, Quattro Pro spreadsheet and Paradox database, but no real contact management or PIM application. It's a suite that attempts to play catch up with Microsoft Office, but never quite gets there.

Lotus SmartSuite Millennium Edition 9.7

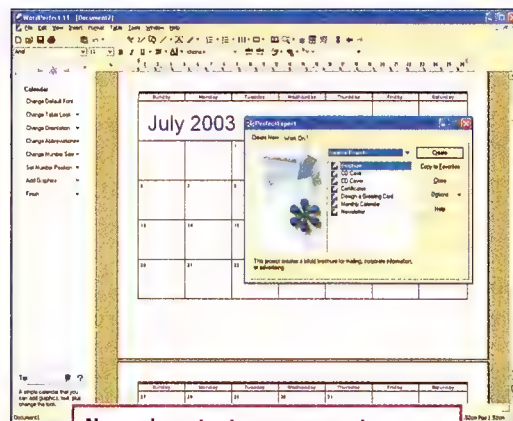
RATING **Price:** \$454.82 (download); \$497.12 (boxed) **Contact:** Lotus **Phone:** 1800 338 933 **Web:** www.lotus.com.au

Lotus SmartSuite Millennium is getting a little long in the tooth and is due for an upgrade (version 9.8) later this year. However, it's a great suite and its strengths include its database (Approach), which many consider to be superior to Access. Its word processor, WordPro, is competent and we love its small formatting palette, which stays open on the screen for easy access. The spreadsheet (1-2-3) was once the industry standard and offers multisheet functionality and a range of functions to meet the needs of most users. Freelance makes short work of creating presentations and Organizer gives Outlook a run for its money in usability with its smart diary-like interface. Throw in SmartSuite's ability to read files from other suites and its competitive pricing, and you have a suite that won't disappoint.

Microsoft Works Suite 2003

RATING **Price:** Works 7.0, \$141; Works Suite 2003, \$229 **Contact:** Microsoft **Phone:** 13 20 58 **Web:** www.microsoft.com.au

Microsoft Works comes in two versions — Works 7.0 and Works Suite 2003. Both versions include a word processor, spreadsheet, flat file database and calendar tool. Also included are the Internet Explorer browser and Outlook Express email software. The suite includes a fully featured version of Microsoft Word XP and a range of additional applications. All the suite applications are gathered together and accessible from



No real contact management features: Corel WordPerfect Office 11

the Task Launcher, which also includes hundreds of custom templates for quick starting a range of school, home and small business-type projects. For sheer bulk of applications, integration and the vast array of handy templates, Works is a better tool for new users and home users than its big brother, Microsoft Office.

OpenOffice.org

RATING **Price:** Free **Web:** www.openoffice.org

The free OpenOffice.org is surprising in the breadth of tools it offers. It includes Writer for word processing, Calc for spreadsheets, Impress for presentations, Draw for drawing, as well as an HTML editor and an equation editor. OpenOffice.org can also import documents from Microsoft Office applications, although some complex documents won't convert perfectly. As it's built on the code from StarOffice 5.2, it's been around longer than its 1.0 version number may indicate, and it will run on a range of operating systems including Windows and Linux. For a free suite, it's hard to go past the functionality it offers for the price you don't pay, although without email, PIM or database tools, it has some obvious limitations.

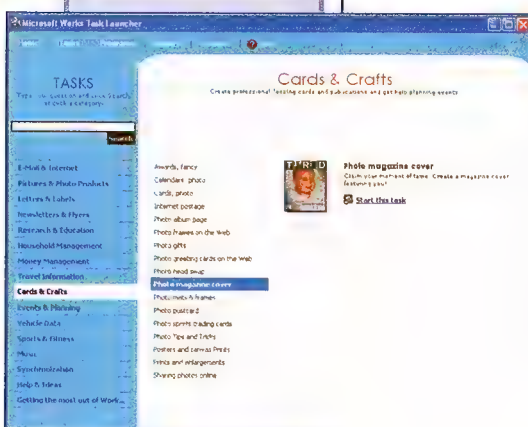
Sun StarOffice 6.0

RATING **Price:** \$209 **Contact:** Intellitron **Phone:** (07) 3257 3211 **Web:** www.sun.com.au

StarOffice 6.0 from Sun is another suite that will run on both Windows and Linux platforms. It can read straightforward files from Microsoft applications like Word, Excel and PowerPoint, but more complex files may suffer some problems such as formatting and macros being lost, and functions not being available. The suite includes a word processor, spreadsheet and presentation tool, as well as the drawing program, equation editor and HTML editor. There is also a database, Adabase D, which provides database support to the applications in the suite where required. Like Microsoft Works, StarOffice comes with a range of prebuilt templates you can use to quick start a task, selectable via its taskbar icon.

— Helen Bradley **PCU**

Includes the full version of Word XP: Microsoft Works Suite 2003



PRESENTATION PROGRAMS

Microsoft PowerPoint 2002

RATING  **Price:** \$694 **Contact:** Microsoft **Phone:** 13 20 58
Web: www.microsoft.com/powerpoint

Presentation software is used to create slideshows and overhead projector transparencies for presenting ideas and information to groups of people. Most presentation software enables you to save presentations to the Web for delivery via a Web browser, and include elements like animated GIFs, sound and movies in your presentations. The industry standard product is Microsoft PowerPoint, which is available both in a standalone version and as part of the Microsoft Office suite.

PowerPoint owes much of its popularity to the popularity of Office itself, but it's worthy of its place as leader of the pack. It has a superior animation tool that allows you to break objects, like charts and clip art, into pieces and animate each piece. Its multiple slide masters allow you to define multiple slide 'looks' and apply these to your slides with a single click. The PowerPoint task panes make it easy to select from the available layouts and design templates, and alter default colours. It has a handy font replacement tool for substituting fonts in a presentation when you don't have those used to create the presentation. Its Pack and Go Wizard packs presentations for delivery on another computer, complete with linked objects, fonts and a viewer which can be used if PowerPoint isn't available.

Presentation tools include a pen for drawing on slides while you are speaking, the ability to clear the screen in the middle of a presentation, and a meeting minder for taking notes as you present, then managing them later on. Action buttons let you open a Word document or Web site by clicking a button and navigating to a predetermined slide

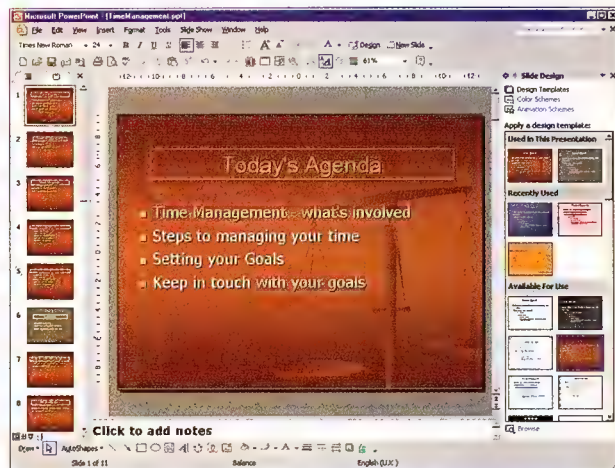
(for example, a hidden one with additional information), then return to where you were with just a couple of clicks.

Why you'd choose another product.

PowerPoint's problems include spasmodic support for movie formats, requiring the use of workarounds for including movies in your presentation. As the PowerPoint viewer is the one shipped with version 97, it can't display some of the newer features and it isn't possible (using just PowerPoint) to burn a presentation to a CD so that it will automatically run when the CD is placed in a drive. Unfortunately, no other program in the roundup offers solutions to all these problems, either.

Another fault is caused by its popularity — its designs become so familiar they lack the freshness you may find when using designs from Presentations or Freelance, for instance. In addition, the new Mac Keynote presentation software breaks new ground in slide animations and makes PowerPoint presentations look positively static by comparison — if you have access to a Mac, give Keynote a try.

Why you'd keep using it. PowerPoint has more features than other presentation software and it's easy to use, particularly if you're familiar with other products in the Office suite. Competent Office users should be able to create complex presentations quite easily with PowerPoint.



Corel Presentations

RATING  **Price:** \$649 **Contact:** Corel **Phone:** 1800 658 850
Web: www.corel.com.au

Part of Corel WordPerfect Office 11, the Corel Presentations screen is attractive and easy to use. Its presentations can be displayed as self-running, on slides, a PC or the Web. Its Web options include saving in Flash format or saving each slide as a JPEG

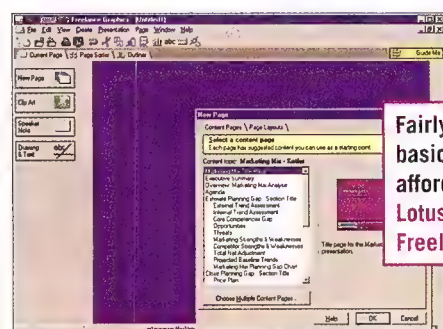
or GIF image, which hogs bandwidth but makes the slides look great. It contains plenty of sample presentations with layouts and editable content to get you started.

Lotus Freelance

RATING  **Price:** \$454.82 for download or \$497.12 boxed
Contact: Lotus **Phone:** 1800 338 933
Web: www.lotus.com.au

Freelance is part of Lotus SmartSuite Millennium. It creates good-looking presentations and supports multiple display options including PC, slide viewer and the Web, and it can read and save files in PowerPoint's PPT format. Its Save and Go feature saves a presentation as a disk file with the Mobile Screen Show Player embedded, so anyone without Freelance can still play it. Its large array of SmartMasters, with content and prompts already in place, make outlining business presentations a cinch.

— Helen Bradley **PCU**



WE RECOMMEND

PowerPoint isn't perfect and there's much we'd like to see improved, but it's still the best of the bunch. If your needs are for a simple, no-frills presentation, Corel Presentations is a slightly less expensive option.

TRY THIS FREEBIE

OpenOffice.org

www.openoffice.org

This suite includes a presentation application called Impress, which is a good, basic presentation tool, costing only the time you wait for the suite to download.

WE
RECOMMEND

Microsoft Outlook 2002 remains the best choice for serious email users and those who need to whip their life into shape. Outlook 2003, once it's released, promises to be even better. Express Plus' intriguing set of features should appeal to many users, while Outlook Express is a bargain for the rest of us.

EMAIL CLIENTS
AND ORGANISERS

Microsoft Outlook 2002

RATING  **Price:** \$225 **Contact:** Microsoft **Phone:** 13 20 58
Web: www.microsoft.com/outlook

Each day, billions of emails zip around the globe. An email program facilitates your participation in this manic flow, enabling you create, send, receive, store and organise electronic correspondence. Such programs are often called email clients. That's because at the other end of your email link is a mail server, either on a network or at your Internet service provider, which serves up email to you and to others via client software.

All email clients include an address book for keeping track of email contacts. Some cross over into the territory of PIMs — personal information managers, or organisers — by adding scheduling, to do lists, alarms and reminders.

The dominant program in both the email and organiser categories, Microsoft Outlook 2002, is just such a crossbreed. Most of its rivals tend to fall either into the email category or the organiser category.

Microsoft Outlook looms over its competitors, not merely because it combines both email and organiser functions into one product, but because for most people it provides a one-stop communications solution. It combines email, calendaring, contact management, to do list, alarms and notes into a program that is easy to use but almost infinitely

extendable. Unless you have a need for the extensive sales-oriented email and contact tracking provided by customer relationship management software such as ACT! or Maximizer, Outlook is the ultimate in personal information management.

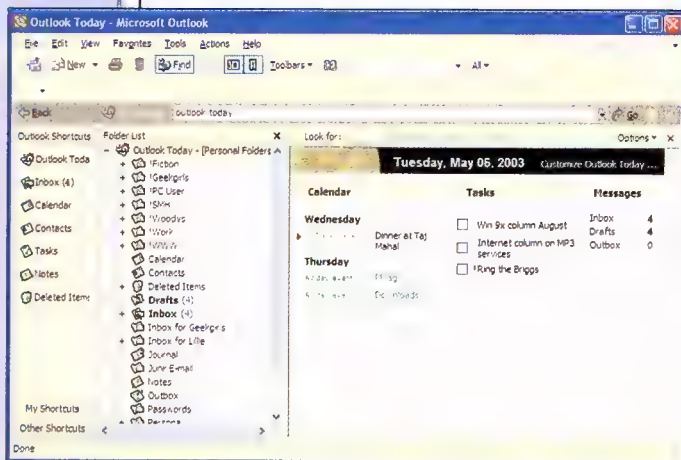
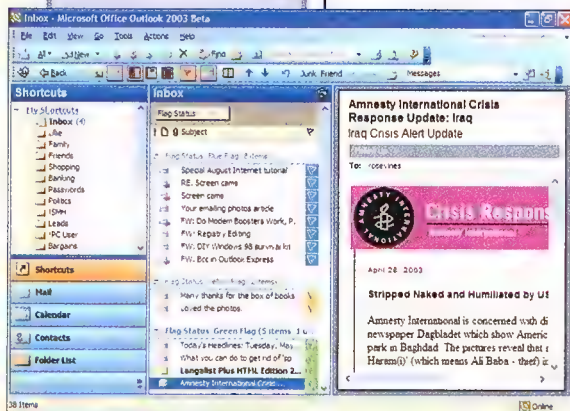
Why you'd choose another product. Outlook has three major drawbacks. First, it's a favourite target of virus writers, which means you need to be particularly careful about using it in conjunction with up-to-date antivirus software. If you're slapdash about viruses and security, find another program to use (and keep your fingers crossed).

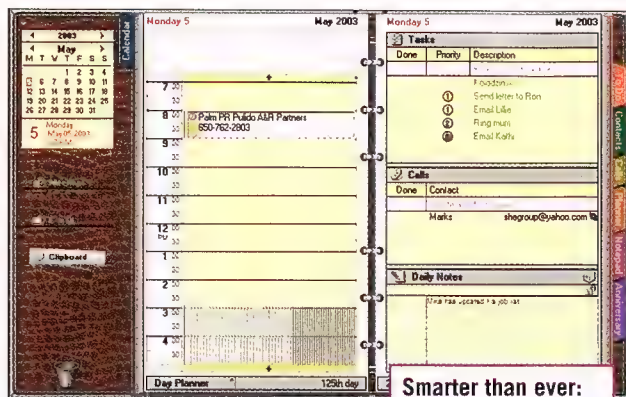
Secondly, Outlook is not adept at controlling the flow of junk email (spam). In fact, its built-in spam filters are a joke. You can create your own filtering rules to compensate, but it's still a big omission. Unfortunately, few of its rivals fare better on the spam front, but at least Microsoft's other email product, Outlook Express, allows you to mark mail as spam and have it deleted from your Inbox in one move, something its big sister fails to do.

Finally, Outlook's price tag puts it out of reach of many users. If your life revolves around email and scheduling, it's definitely worth the outlay. However, the average home user would do better combining a free or inexpensive email program with one of the less expensive organisers. If you use Internet Explorer as your browser, you'll find Outlook Express comes bundled with it and makes a very serviceable email client. Netscape is also bundled with an adequate email client. If your email requirements are modest, these free options should satisfy. Alternatively, you may find one of the reasonably priced competitors offers special features you require.

Why you'd keep using it. If you're really serious about email, Outlook is unquestionably worth the money. Its contact management and scheduling features provide context for your email and work together beautifully. If you work in collaboration with others, Outlook helps you integrate your workflow with theirs. It also dovetails well with other Microsoft Office applications. Its folder management is excellent, making it possible to manage a deluge of email. It handles multiple accounts with ease, works in conjunction with Web-based email as well as traditional mail servers, and its rules and filtering are extensive and easy to implement.

Even better news is coming: Outlook 2003, due out later this year, includes improved spam filtering, a revamped Inbox display, and much-needed improvements to the calendar. The new Outlook allows you to customise how each component is displayed, flag and categorise messages in new ways, and keep tabs on unread email and email marked for follow up across all folders.





Eudora 5.2

RATING Price: Free ad-supported; \$US40 without ads
Web: www.eudora.com/email

Eudora focuses purely on email. It has been around for years and shows many signs of maturity, looks a treat and delivers some innovative twists. Eudora's filters are particularly powerful and highly configurable, making this an excellent choice for heavy email users. It provides multiple account support so you can comfortably share it with others. Other features include Secure Socket Layer (SSL) support to help protect your email from interception, built-in synchronisation with the Palm, and email usage statistics. The Eudora Sharing Protocol (ESP) adds peer-to-peer file sharing, for sharing files with a selected group of friends, family or associates, simply by placing them in a shared folder. Its multiwindowed interface can be confusing to master, making it more suited to power users than casual emailers.

Express Plus 1.05

RATING Price: \$US35
Web: www.isbister.com

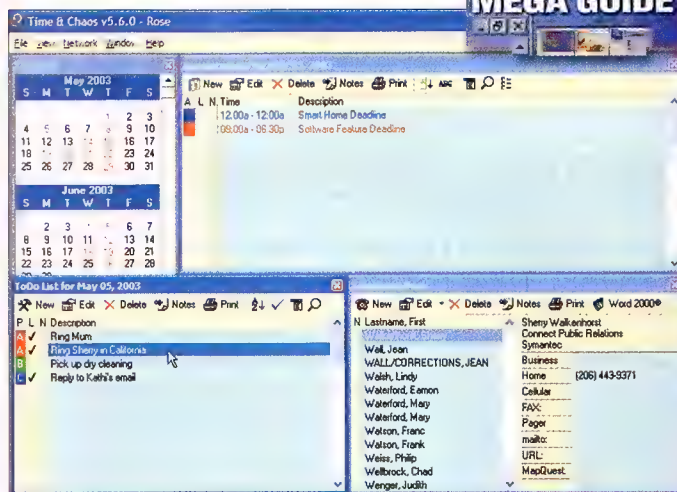
Express Plus is a recent entrant to the email client arena. Clearly positioned as an alternative for those who prefer not to use Microsoft products, it has a lot more going for it than mere rivalry. It has standard features you'd expect, such as multiple account support, multiple mailboxes, filters, integrated address book, stationery and HTML support. Add to those regular features a swag of handy extras including: mail merging, remote preview of message headers so you can avoid downloading spam, mail redirection to forward mail messages under the original sender's name, and automatic tagging of email to identify messages from senders already in your address book. This is an excellent alternative for those who want a simple but well-featured email client, although it still has a few kinks in it which need to be addressed in future releases.

Lotus Organizer 6

RATING Price: \$135 Contact: Lotus Phone: 1800 338 933
Web: www.lotus.com.au

Lotus Organizer hasn't changed much in appearance over the years, but it has added Web savvy and integration with email clients to bring itself into the 21st century. Using a Filofax-style design to give it a familiar feel, this PIM includes tabs for Calendar, To Do, Contacts, Calls, Planner, Notepad and

Smarter than ever:
 Lotus Organizer 6



SOFTWARE MEGA GUIDE

Anniversary. Each section is easily customised via right-click shortcuts, while many actions — such as adding a contact to a task — can be accomplished via drag and drop. The insanely useful Create Links feature lets you link any item — contact, task, appointment, whatever — with any other. You can import data from other applications, add and customise your own sections, save Web pages into your Notepad, sort information instantly, and print pages or entire sections to take with you on the road.

Microsoft Outlook Express 6

RATING Price: Free
Web: www.microsoft.com/ie

Outlook Express may be the freebie bundled with that other freebie, Internet Explorer, but it's no cheapie when it comes to features. Outlook Express works well as an email client for both single and multiple users on the same machine. It's very easy to use, but like all Microsoft programs, it provides plenty of shortcuts so advanced users can work more efficiently. Its junk email handling is not that great, but it has easy-to-use, highly customisable filters that can handle spam as well as sort legitimate email automatically. The main window offers a message list and preview pane, with the contacts list integrated into the same display. The downside? It's a prime target for virus writers.

Time & Chaos 5.6

RATING Price: \$US45
Web: www.isbister.com

Time & Chaos is a PIM which works equally well for individual users and for small office networks. Its all-in-one design puts everything into a single window: Appointments, To Do list, Telephone Book and Calendar. This approach gives you get an at-a-glance feel for your day. Even better, the Linked Name feature lets you connect a contact's details with an appointment or task, so clicking on the appointment displays the associated contact. You'll be able to use most features in Time & Chaos without referring to the help file, but creating a networked setup can be confusing. Check out the File menu and you'll find prefab printing templates, as well as easy backup and restore options to safeguard your information.

— Rose Vines **PCU**

Every aspect of
 your day at a
 glance: Time &
 Chaos 5.6

DATABASES

Microsoft Access 2002

RATING  **Price:** \$694 **Contact:** Microsoft **Phone:** 13 20 58
Web: www.microsoft.com/access

Database software allows you to store, organise and retrieve data. The 'data' can be anything from a mailing list to a library catalogue, to a farm chemicals usage tracker. Database programs not only provide the means to enter and retrieve the data, they also provide tools to automate entire data-driven applications. Microsoft Access is the heavyweight champion of databases and has been ever since Windows appeared.

Access has earned its reputation based on its crafty combination of helpful wizards for automating many database tasks and its professional-grade tools for developing applications suitable for both small organisations and large companies. There are few database applications beyond Access' capabilities and its statistical and data analysis tools are without peer.

Why you'd choose another product. Not everyone needs this much power. If all you want to do is maintain a club's membership list, track your DVD library or computerise your customer mailing list, don't buy Access. It's too much database for you. It will overwhelm you with its myriad options and its price tag.

For simple database needs, FileMaker or Approach are much better choices. Like Access, they allow you to create applications that

draw data from multiple tables (so-called 'relational' databases), but they won't confuse you with tools

and options you're unlikely to need. Both FileMaker and Approach include simple scripting languages for automating procedures, and these are far easier to learn than Access's full-blown programming language, Visual Basic for Applications (VBA). FileMaker also enables you get your data onto the Web with remarkable ease. In fact, in many cases, FileMaker is really all the database you'll ever want.

Why you'd keep using it. If you have more open-ended or demanding database needs, it really is hard to go past Access. Although it has a reputation for being difficult to learn and use, the reputation is in many ways undeserved. The wizards do a remarkable job of simplifying what would otherwise be tear-your-hair-out procedures, and all that power makes tasks which are difficult to accomplish in lesser products relatively easy. Access comes with a very useful collection of prefab templates and applications, which you can use instantly or modify to suit your needs. Those applications also work well as instructional tools.

Although trying to digest all Access has to offer is truly daunting, you'll get value for money even if you completely ignore the advanced tools such as the structure analyser, the performance analyser, data encryption, SQL and VBA.

On the upgrade front, if you're still using Access 97, consider upgrading to the soon-to-be-released Access 2003. There are few improvements between Access 2002 and Access 2003 to justify the incremental upgrade, but the differences between Access 97 and the latest version are significant. The additional wizards, smart data analysis tools and simplified relational table handling make the upgrade price worthwhile.

XML data handling will appeal to advanced users. It allows you to integrate multimedia into your applications and includes a useful set of starter templates. This is an excellent choice for standalone database applications.

Lotus Approach 9.5

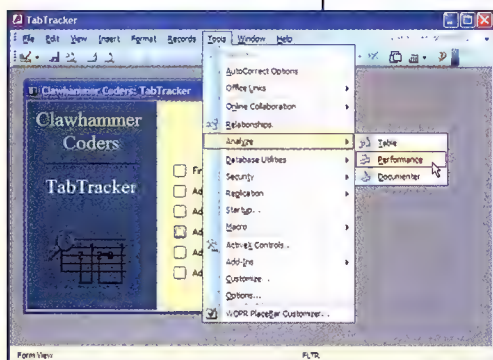
RATING  **Price:** \$203 **Contact:** Lotus **Phone:** 1800 338 933
Web: www.lotus.com.au

Lotus has lavished neglect on its Approach database and still the product shines. There's no way it can compete feature for feature with Access or FileMaker, but at a fraction of the price, it doesn't have to. Approach provides full relational support, easy forms and report creation, and a handy script language. It's remarkably easy to use and allows you to automate many processes. It's not speedy, but is suitable for small database applications where performance isn't crucial.

— Rose Vines **PCU**

WE RECOMMEND

For heavy-duty databases and for accommodating future expansion, Access is still the pick. But if your database needs are modest, steer clear of Access. You'll do better with FileMaker or Approach. While FileMaker is definitely the more polished of these two, Approach's price tag makes it a great choice for simple database needs.

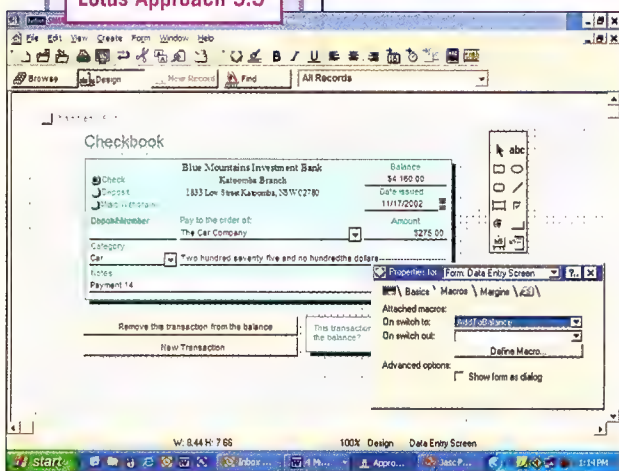


Handy and cheap: Lotus Approach 9.5

FileMaker Pro 6

RATING  **Price:** \$599
Contact: FileMaker
Phone: 1800 028 316
Web: www.filemaker.com.au

FileMaker Pro is a real crowd pleaser. It runs on the Mac as well as PC, with data synchronisation to Palm and Pocket PC provided by FileMaker Mobile. Its minimalist interface and simple table creation make it a welcoming entrance point for newcomers, while its macro-style scripting and



BROWSERS

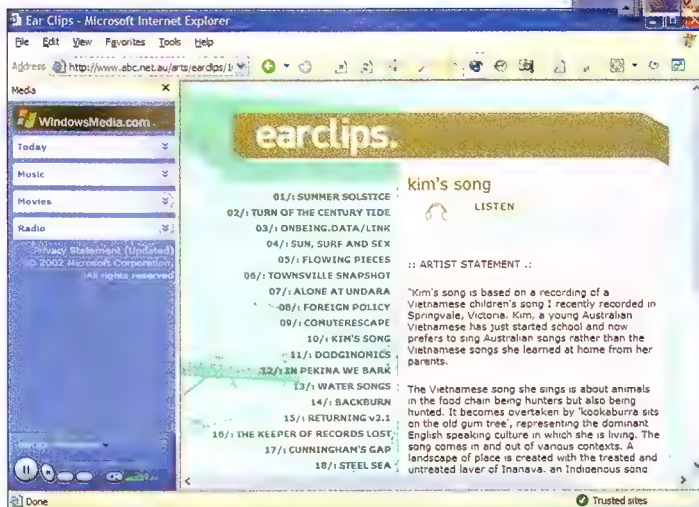
Internet Explorer 6

RATING Price: Free
Web: www.microsoft.com/ie

For most of us, having a computer also means having access to the Internet, which makes the Web browser an essential part of our computer system. The browser provides a window into the World Wide Web and a means of navigating the intricate network of links which make up the Web. Most browsers also come bundled with that other indispensable online component, an email client, so they do double duty.

After a lengthy tussle with Netscape, Microsoft's Internet Explorer (IE) has emerged the undisputed industry leader for browsers, with a 96% share of the market. Some sceptics may suggest IE has gained industry standard status purely through Microsoft's ruthless flexing of marketing muscle. While it's true that Microsoft's tactics of giving away its browser and shoeorning it into the operating system have had a major part in its success, there's more to it than that. Its major rival, Netscape, dropped the ball around version 5 of Navigator, abandoning regular consumers and failing to keep abreast of new trends. While Netscape is back on track with its latest version, Netscape 7, Microsoft has in the meantime forged ahead with improvements in speed, support for standards including HTML 4.01 and cascading style sheets, and improvements in privacy controls. Outlook Express, IE's companion email client, has also developed into a stable and usable program.

Why you'd choose another program. IE may dominate the market, but it has some serious drawbacks. Its security is less than perfect, and as a prime target of hackers, that's a real concern. Using IE (and Outlook Express) without antivirus protection and without installing regular patches is an invitation to disaster. If you're worried about security, you can reduce your vulnerability by using a less popular browser, such as Opera. Unlike Mozilla and Netscape, which allow you



to set up a profile for each user, IE is not particularly multiuser friendly, with no easy method of keeping bookmarks and browsing history separate.

IE lacks tabs for displaying multiple pages in a single window, a feature present in all its major competitors. That may sound a small thing, but once you've tried tabs, you will scorn tabless browsing. And, if you use Outlook Express for email, you'll find its junk email handling is woeful. None of its competitors are particularly adept at eliminating spam either, although Mozilla has added spam filtering to its latest update, making it an even more attractive alternative.

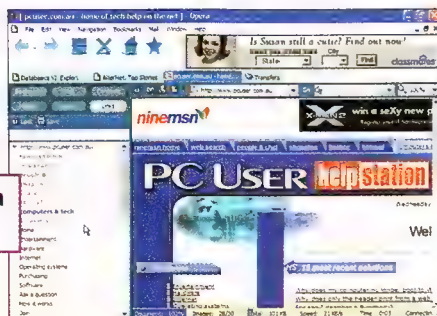
Why you'd keep using it. Despite the drawbacks, there's still plenty to like about IE. It provides excellent support for Web standards, so it displays almost all well-written sites to full advantage. Its privacy controls and per-site cookie handling are useful, and its built-in media playing capabilities integrate video and sound into the browser. Its interface is highly configurable and stuffed with shortcuts, many of them available by right-clicking in various parts of the browser window. That's something its rivals ignore to their detriment. And the bundled Outlook Express is a mature and flexible mail handler, suitable for single or multiple users.

Mozilla 1.3

RATING Price: Free
Web: www.mozilla.org

Mozilla is the technology upon which Netscape Navigator is built. Think of it as Netscape without the commercial clasp, which is why it rates a recommendation over Netscape 7. Mozilla is speedy, complies with all major Web standards and looks great. A clean, tabbed interface incorporates many advanced features. The accompanying email client includes junk mail filtering and newsgroup filtering. The one big caveat: no support is available, so beginners should look elsewhere.

Style comes at a price: Opera 7.1



Opera 7.1

RATING Price: Free ad-supported version; \$US39 ad-free
Web: www.opera.com

It's amazing that Opera has survived so long, charging for what is given away free by others. That's both a tribute to people's loathing of its chief competitors and to Opera's own innovative feature set. Opera has the most stylish interface of all the browsers, with

customisable tabs and a Hotlist which integrates email, file transfers and bookmarks into a hideable bar. It still cries out for better standards support, so you'll find some sites don't display perfectly.

— Rose Vines **PC U**

WE
RECOMMEND

Internet Explorer is a good browser, but its irksome lack of tabs puts it a generation behind in the interface stakes. The best thing about it is Outlook Express. If you don't use Outlook Express, consider giving Mozilla a try. Even though Mozilla is in essence test software, it's still the class leader.

IMAGE EDITING

Adobe Photoshop 7

RATING  **Price:** \$1,503 **Contact:** Adobe **Phone:** 1300 550 205 **Web:** www.pacific.adobe.com

All the programs in this category, also known as paint software, allow you to edit and manipulate photos and other bitmap images. They all offer the same basic set of tools — paintbrush and pencil, selection tools including a magic wand and lasso, fill bucket and text. They also now offer some form of layers or floating objects, so you can combine multiple objects in the one image.

They also offer a battery of special effects to alter your images, and most also support plug-in effects so you can add even more. Recent innovations have blurred the boundaries of what defines a paint program. Many now include vector tools such as lines, shapes and 3D effects — all things usually found in illustration programs.

Adobe Photoshop has been the leader almost since the inception of this kind of software. It is the first choice of professional designers and computer artists. It hasn't always led the way in terms of features, but when it does add new features, it does it well. It has also introduced many of the technologies now taken for granted, such as plug-in effects and layers. Photoshop's layers architecture gives you creative freedom to try things out and change them at any time.

Photoshop handles Web design adequately, but its companion program ImageReady (also included)

specialises in Web graphics, allowing you to easily transfer your high-res Photoshop images to Web-ready GIFs or JPEGs.

Adobe makes several other professional imaging tools such as Illustrator, InDesign and Acrobat. It has just about cornered the market, and if you use one of their products, it makes good sense to use others from the range, as they are designed to integrate on many levels. And Photoshop has always placed quality print output at the top of its list of priorities.

Why you'd choose another product. Photoshop is expensive, and it has more power than many people need. If you just want something to touch up images from a digital camera or prepare Web graphics, there are many less expensive tools that do an excellent job of this, do it more easily, and offer features not yet found in Photoshop, such as advanced vector and 3D effects.

Or you may prefer something more specialised. A digital artist may find something like Corel Painter, with its organic paint approach, more to their style. While you can readily create original images in Photoshop, it is really more of a designer's tool than an artist's tool. And while ImageReady is great for professional Web images, if you use other tools from rival Macromedia, you may find Fireworks fits your workflow better.

Why you'd keep using it. If you are serious about print output, Photoshop is simply the best. It is also the best at text handling, and the way its layers work has yet to be surpassed.

What it lacks in certain areas is not a major concern for professionals and it catches up with each update. This version, for example, includes a built-in file browser and a Healing Brush, which works like an intelligent Clone tool. There are also organic tools along the lines of Painter, as well as a spellchecker for text.

For serious developers, Photoshop includes Actions for macro-like commands and complex batch operations. Beyond this is AlterCast, which allows you to add variables to your art within ImageReady that can dynamically pull data out of a database.

Corel Painter 8

RATING  **Price:** \$649 **Contact:** Corel **Phone:** 1800 658 850 **Web:** www.corel.com.au

simulating the effects of oils on canvas or watercolour on paper. It offers Watercolor, Ink, Oils or Mosaic effects for quick and unique variations, using one of hundreds of possible brushes. The level of control Painter provides is overwhelming. This new version adds the ability to mix colours interactively, just as you would on a real palette, and design your own brushes. There is support for Photoshop-compatible plug-ins. While it does use layers, has good colour management, text support, and even GIF and JPEG optimising, it doesn't quite achieve Photoshop's standard in these areas. It also lacks features such as effects previews and a decent file browser. Where it excels is in creating organic, realistic pictures of the type an artist might otherwise create on canvas or paper (a graphics tablet is essential for this).

ALSO
CONSIDER

If all you want to do is touch up your photos, then you could also consider simpler digital photography tools such as Jasc Paint Shop Photo Album 4, Ulead Photo Express 4, Adobe Photoshop Album or one of the Photo editions of Microsoft Picture It!. All are very easy to use and do a pretty good job of organising your photos, basic tweaks such as red-eye reduction, and outputting to print or Web. But serious photographers and designers would find them limiting and should choose a comprehensive image editor.



Photoshop on a budget: Jasc Paint Shop Pro 8

also support for FrontPage users and Photoshop text layers. You would use Fireworks instead of Adobe ImageReady. Navigation bars and menus are easy to create, and Flash programmers will welcome the ActionScript and Symbols features that are included. Those working cross-platform will also appreciate the efforts to make this as seamless as possible, with support for Windows XP and Mac OS X. This program is one for serious designers and Web programmers, rather than home or small business dabblers. Designers would still need a dedicated imaging tool like Photoshop for print work and image creation, but for Web graphics, especially if you use Flash or Dreamweaver, this is an almost essential addition to your tool kit.

Ulead PhotoImpact 8

RATING **Price:** \$229 **Contact:** Pineapplehead Distribution on 1800 657 601; Conexus on (02) 9975 2799 **Web:** www.asiapac.ulead.com

PhotoImpact offers good support for scanners and digital cameras as well as print output, but its specialty is easy Web design. Its GIF and JPEG Smartsaver works a treat, and there are good tools for quick and easy button creation, image slicing and mapping, and 3D text. Its layers feature is more limited than those of other programs, but it's quite adequate for most tasks. PhotoImpact 8 comes with Ulead's handy Photo Explorer and GIF Animator, as well as a second disc that includes GraphicsDesk for online clip art images you can purchase and download. While PhotoImpact 8 can't compete with Photoshop on many levels, it is nevertheless a great tool for amateurs and excellent for Web graphics design and preparation, including 3D text, drag-and-drop image manipulation and Web applications.

— Philip Moore **PCU**

For Web designers, especially those using Dreamweaver: **Macromedia Fireworks MX**

Jasc Paint Shop Pro 8

RATING **Price:** \$269 **Contact:** Communicue **Phone:** (02) 9622 5624 **Web:** www.jasc.com

If you're looking for Photoshop on a budget, Paint Shop Pro perhaps comes the closest. While it lacks many of Photoshop's advanced features, what it does offer makes it very good value. Importantly, it supports many Photoshop plug-ins and uses layers, allowing multiple objects per layer, including adjustment layers for applying nondestructive effects to your image. It has a good combination of raster and vector tools, with a library of ready-to-use shapes, reasonable text handling and excellent conversion tools, including those for Web graphics. This brand-new version comes with a host of new effects, correction and selection tools (including a background eraser and warping tools), along with a new paint engine that borrows the organic paint effects of Painter. The interface has been revamped and there's also a new scripting tool for creating automated tasks.

Macromedia Fireworks MX

RATING **Price:** \$659 **Contact:** FirmwareDesign **Phone:** 1300 369 951 **Web:** www.macromedia.com/ap/

Fireworks specialises in Web graphics and integrates very well with Macromedia Dreamweaver. There is

Handy for Web graphics:
Ulead PhotoImpact 8

WE RECOMMEND

Photoshop is the pick for professionals, unless you come from a true artistic background, in which case, consider Painter. Web designers using Dreamweaver should check out Fireworks rather than ImageReady. For the rest of us, Paint Shop Pro is a great all-rounder, and my personal favourite is PhotoImpact for Web graphics and special effects.

DESKTOP PUBLISHING

Adobe InDesign 2.0

RATING
9Price: \$1,725 Contact: Adobe Phone: 1300 550
205 Web: www.pacific.adobe.com

Being an Adobe product, it integrates well with other professional Adobe tools like Photoshop and Illustrator. Print-quality Acrobat PDF output is fully integrated (which is vital these days), and XML import and export provides a link to Web site development. What more could any serious layout artist want?

Why you'd choose another product. InDesign is a professional tool intended for publishers and print houses. If that's not you, then you could save yourself money by going with one of the other programs here.

Programs aimed at the average user are generally easier to get up and running, and offer a host of ready-made templates, clip art and wizards to guide you through the process. InDesign doesn't offer anything like this. If you are only interested in producing a simple newsletter or personal documents, then InDesign and other high-end tools like Quark or Ventura are really overkill.

That said, if you are at all serious about DTP and need to create a wide range of document types, you will find many things in InDesign that will make life easier, and the price is actually very reasonable.

Another reason you may decide against InDesign is that you want to avoid the hassles of changing programs. This can be a major operation for some professionals, requiring training and causing disruption to workflow, which is why many are still using Quark XPress. But check out InDesign and you may change your mind. Many publishers have already taken the plunge.

Why you'd keep using it. InDesign is still a very new product and many in the industry didn't consider it mature enough to switch to until version 2.0. However, coming from Adobe, you can be sure it will have a long life, and it should continue to develop and grow while remaining focused on professional reliability.

InDesign is currently the most advanced program of its kind. It also provides the benefits of shared and integrated technology with its Adobe stablemates, Photoshop, Illustrator and Acrobat. For many design professionals, InDesign is clearly the best option.

Distiller. Microsoft Publisher and Quark files, as well as Microsoft Word and RTE, can be imported. With the Data Merge feature, you can easily use content from a database or spreadsheet. Lots of templates and fonts, and thousands of clip art images in Illustrator and JPEG formats, will get you started. If you're serious about good-quality print output but not a publisher, PageMaker is the obvious choice. It just can't match InDesign for professional features or overall value.

Corel Ventura 10

RATING
8Price: \$1,389 Contact: Corel Phone: 1800 658 850
Web: www.corel.com.au

Many years ago, Ventura was the professional's

Desktop publishing, or DTP, was one of the key applications that brought the personal computer into the office back in the '80s, particularly for anyone involved in the publishing industry.

Put simply, DTP software is a layout tool for combining text and graphics and preparing pages for print.

This is something

most word processors do easily nowadays. Indeed, for smaller jobs of this kind, image editors or illustration programs would also suffice. Where DTP software stands out is in its ability to handle large quantities of text and graphics over multiple pages, and prepare it for a professional print house for publication. Almost all newspapers, magazines, journals, brochures and the like are produced using DTP software.

Not long ago, Quark XPress was the clear market leader in professional DTP, and even now some may find it controversial that we have declared InDesign the new industry standard. However, there's no disputing that InDesign has taken the professional publishing world by storm.

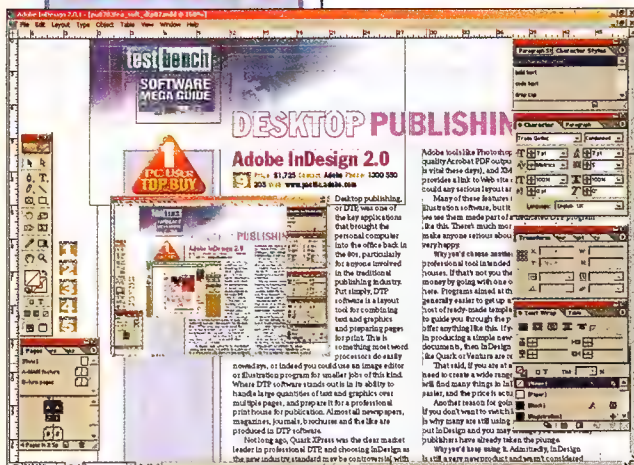
Like any decent DTP program, InDesign lays out text and graphics, using any installed font, master pages, style sheets and so forth. What sets it apart are features like drop shadows and feathering on text or graphics; Opacity and Blend modes; professional spot colour and transparency support when printing; and built-in support for tables and Excel file import.

Adobe PageMaker 7.0

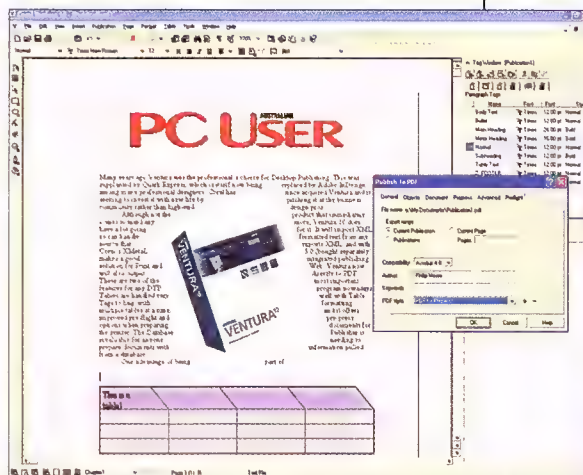
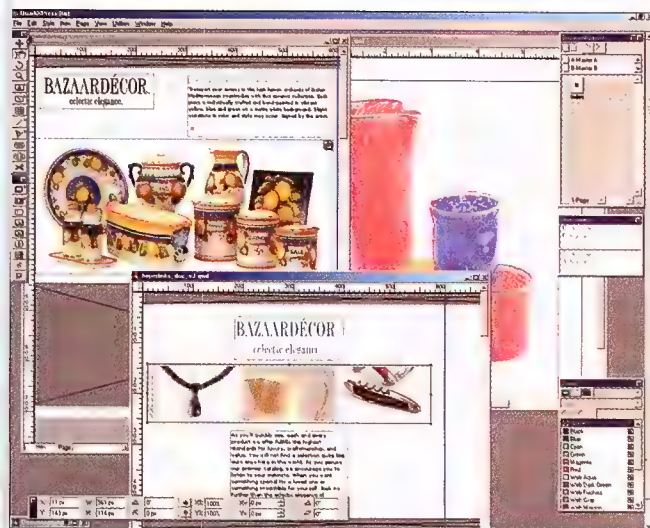
RATING
8Price: \$1,231 Contact: Adobe Phone: 1300 550
205 Web: www.pacific.adobe.com

PageMaker has long offered advanced features like master pages, layers, text and graphic frames, tables and wizards for complex operations, and it is cross-platform (with a Mac version). It can be used to lay out business cards, simple brochures and flyers, and multipage booklets, catalogues and the like. This makes it a great choice for serious amateur designers or small business professionals.

There is built-in support for Photoshop and Illustrator files, and PDF import/export to Acrobat

WE
RECOMMEND

Professionals are not inclined to switch tools, as changing can seriously upset their deadlines and present a whole new learning curve. But they are doing it for InDesign. For small business, the standard is Microsoft Publisher, not because it is the best but because it is the most convenient and cheapest, fitting in well with other Microsoft Office programs. If you want more than Publisher offers, check out PageMaker or Ventura.



Business partner
for CorelDRAW:
Corel Ventura 10

Professional but pricey: Quark XPress 5.01

A serious contender: Adobe PageMaker 7.0

choice for DTP. Corel has since acquired Ventura and is seeking to invest it with new life by pitching it at the business community rather than design pros. It will import XML, so it can handle formatted text from any source that exports XML. Combined with Corel's XMetaL 3.0 (sold separately), it makes a good integrated publishing solution for print and Web. It can also output directly to PDF. It handles tables very well and the Database Publisher is invaluable for anyone needing to prepare documents with information pulled from a database. Ventura has at least one thing over its main rival PageMaker 7 — XML support.

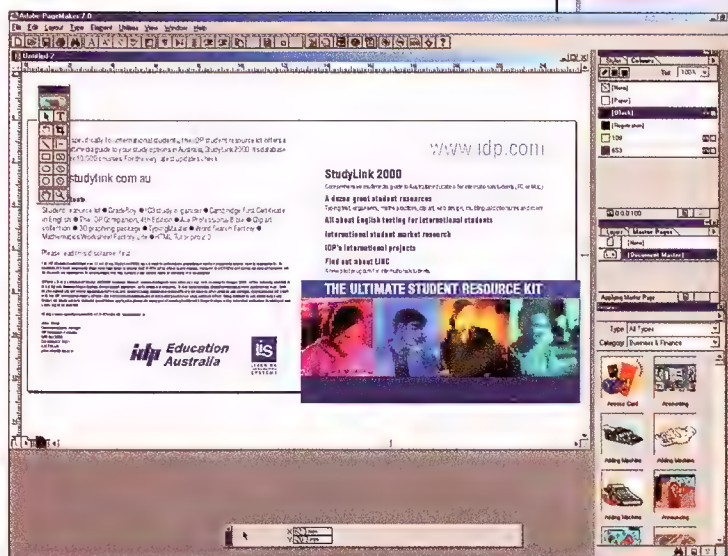
This is an obvious choice for those who use CorelDRAW and need something better suited to large documents.

Microsoft Publisher 2002

RATING Price: \$266 Contact: Microsoft Phone: 13 20 58
Web: www.microsoft.com.au

In many cases, Publisher is an easy DTP choice for small businesses and home use. With its hundreds of excellent templates and wizards, putting together a brochure, flyer, newsletter, banner or gift certificate couldn't be easier. Alternatively, you can start from scratch, add vector shapes and lines, and change anything you want. You can also create hyperlinks and other Web objects, and export the whole thing as a Web site. That said, this is not the best tool to design your site — the site may look good but Publisher generates heaps of unnecessary code.

Publisher 2002 is a great all-round tool at an affordable price. It is not intended for professional print output, despite the 'Pack and Go' option, and it lacks many high-end features. If you are struggling to get Word to do what you want, then Publisher may be for you.



Quark XPress 5.01

RATING Price: \$3,200 Contact: Modulo Systems
Phone: (02) 9699 2766 Web: www.quark.com

Quark has been having a rough trot lately. This version was overdue when it was released about a year ago, and it can't compete with InDesign in terms of value for money. Still, many are sticking with it, and it is a good program in lots of ways. It's brilliant at the essentials of laying out text and graphics, as well as with its more advanced features like text on a path, clipping paths, style sheets and generating indexes and contents.

This release of Quark includes XML export for 'Media Independent Publishing', and decent table support, as well as layers and output direct to HTML for the Web. All the improvements in this release are worthwhile, and if you are serious about DTP, it will definitely serve you well. There are heaps of plug-ins for Quark available, and it is still widely supported by serious publishing houses.

— Philip Moore **PCU**

ALSO CONSIDER

If all you want to do is create simple home projects and Microsoft Publisher is beyond your needs, consider even simpler and cheaper layout tools such as Broderbund The Print Shop 15, Microsoft Picture It! Publishing Platinum and Sierra Print Artist. For special projects, check out tools such as Sierra Hallmark Card Studio and Disney Print Creations, or Broderbund American Greetings Create A Card and Calendar Creator.

ILLUSTRATION

WE
RECOMMEND

Well, it depends. If you use other Adobe products, it's hard to go past Illustrator. But if you are working mostly for Web output, FreeHand is the better choice. If you're getting into drawing for the first time, Xara X is great value. But if you want a complete graphics package with heaps of extras, go with CorelDRAW.

ALSO
CONSIDER

If you want to design an object like a house in detail, then you may be better off with a specialised computer-aided design program. AutoCAD is the CAD industry standard, but you'll find cheaper and easier alternatives such as IMSI TurboCAD. However, if you're new to CAD and just want to put together some ideas for your home, go for a cheap home design tool such as IMSI FloorPlan 3D, or Broderbund 3D Home Architect or 3D Home Landscape Designer.

PC USER
TOP BUY

Loads of extras:
CorelDRAW
Graphics Suite 11

Adobe Illustrator 10

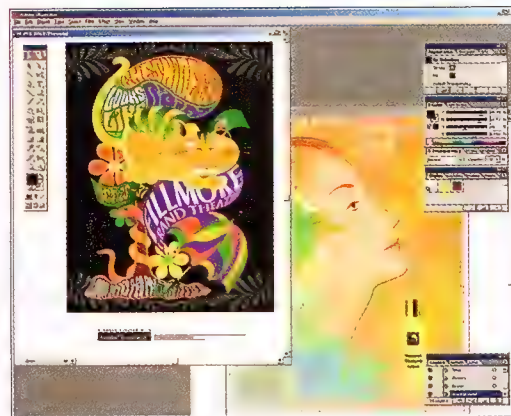


Price: \$985 **Contact:** Adobe **Phone:** 1300 550 205
Web: www.pacific.adobe.com

Illustration tools are designed around vector shapes and lines to create their images. They are not well-suited to dealing with photos, but they are great at doing illustrations, cartoon images, business logos, text effects and pseudo-3D images.

Again, Adobe has claimed the high ground here, and you will find most professional designers use Illustrator. However, the choice is nowhere near as clear-cut as in other categories, as you can tell by our ratings for these programs. Rival programs FreeHand and CorelDRAW both have strong followings.

Illustrator is a great tool for producing print-quality vector art. It provides excellent creative control over shapes, text and fills, and several unique drawing and distortion tools. Beyond this there are some strong Web features, including image slicing and export to Flash SWF and SVG formats (this is more for stills than animation). There is also support for variables to insert dynamic data into your images and, of course, integration with other Adobe tools from Photoshop to Premiere.



Why you'd choose another product. If you use other Macromedia products or do a lot of work that is going to end up in a Flash animation, you are better off using FreeHand. Also if you want to create multipage documents without going to the extent of using a DTP application, FreeHand and CorelDRAW are more suitable. CorelDRAW also offers plenty of extras.

Why you'd keep using it. Because you know it, and because you use other Adobe products. It also has illustration tools that you won't find anywhere else.

CorelDRAW Graphics Suite 11



Price: \$1,169 **Contact:** Corel **Phone:** 1800 658 850
Web: www.corel.com.au

CorelDRAW also has plenty of fans, perhaps because of all the extras included. This full version includes PHOTO-PAINT for bitmapped images and RAVE for Web animation, plus heaps of clip art and fonts. But CorelDRAW is also an excellent vector illustration tool in its own right, as well as serving as a multipage DTP program for smaller projects. It is easy to use, yet offers a great level of customisation and control

if you get deeply into it. Similar to Illustrator, it provides symbols for reusing elements, and new polyline and three-point curve tools make drawing curves and lines of any type even easier.

Macromedia FreeHand MX



Price: \$869 **Contact:** FirmwareDesign **Phone:** 1300 369 951 **Web:** www.macromedia.com/ap/

FreeHand MX does everything a good vector program should, with advanced tricks like perspective grids and autotracing from bitmapped images. The big focus is on Web output, including several tools designed to create Flash animations directly in FreeHand. It also encroaches on DTP territory with master pages and multipage documents. This latest MX release adds heaps of cool new features, including Multiple Attributes to objects to avoid duplications, Live Effects for nondestructive effects, and a 3D extrude tool. All this makes it great for print work, but it is Web design where it really excels.

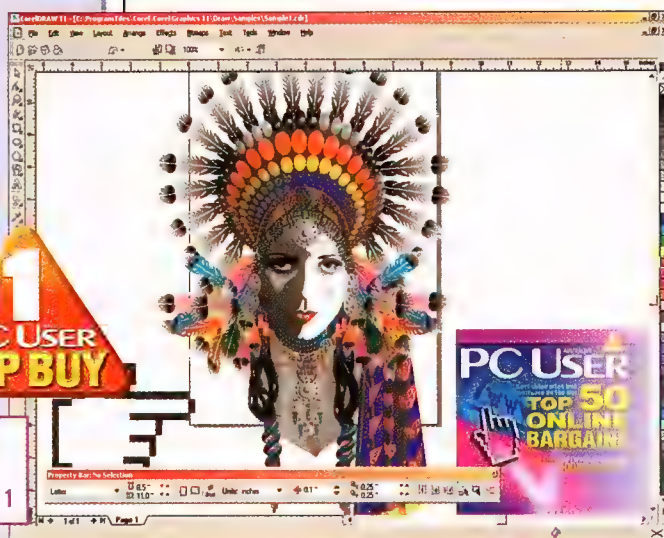
Xara X



Price: \$286 **Contact:** Xclusive Software **Phone:** 1300 137 140 **Web:** www.xara.com

Don't let the price fool you — this is a sophisticated program, if not quite on a par with Illustrator and FreeHand. All the usual illustration tools are included, there's a good tracing tool and text is handled very well, though you can't split up a text block to edit individual letters. A great alternative.

— Philip Moore **PCU**



MULTIMEDIA AUTHORIZING

Macromedia Director MX

RATING  **Price:** \$2,599 **Contact:** FirmwareDesign **Phone:** 1300 369 951 **Web:** www.macromedia.com/ap/

Multimedia authoring software is designed primarily for creating self-contained applications which can be run off a CD, used as part of a kiosk display, or even run on the Internet. It is a visual design tool that brings together all your media elements and adds interactivity. The key thing that sets multimedia authoring apart from mere presentation software is the level of interactivity you can program, and the fact that it can be used to create professional multimedia titles for distribution on CD.

Most multimedia CD-ROMs are created with Director. The key reason Director is the choice of most professionals is its programming language, Lingo. This gives it a level of customisation and control not possible in almost any other authoring tool. Another factor is the animation timeline. As Director started life as an animation tool, it has a unique approach to multimedia. At times this is archaic, but it's also incredibly flexible.

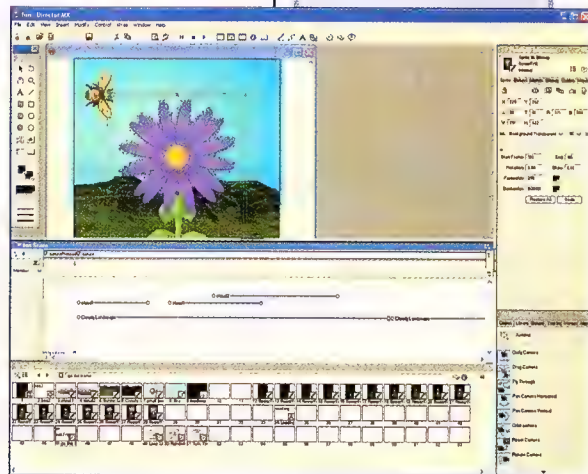
Keeping ahead of the game, Director's most recent innovations include a 3D engine where you can import models from a program like 3ds max and build and control (via Lingo) a 3D world. There is also accessibility support for the visually impaired, so you can create presentations that will work with any text-to-speech software a user has installed, as well as improved keyboard support for those who cannot use a mouse.

Macromedia Flash content can be included with good Lingo control. This also means you can use Flash to connect to Macromedia Cold Fusion MX server technology for multiuser games, ecommerce and database functionality.

Projects can be saved as executable files, and there is good facility for sharing resources and breaking up larger projects into discrete sections.

Why you'd choose another product. You won't go far with Director unless you learn Lingo and for many users, that may be overkill. If you just want fancy multimedia presentations but you're finding PowerPoint restrictive, Illuminatus Opus Pro will do the job. Computer-based training programs like Macromedia Authorware are more suited to creating training courses, while for most Web applications, Flash is a better choice.

Why you'd keep using it. Director is best at highly visual interactive titles and games. Its Shockwave engine has spawned a whole subcategory of online games, and certainly, if you need things like online connectivity, advanced video and 3D support, Director is the best option around.



Illuminatus Opus Pro

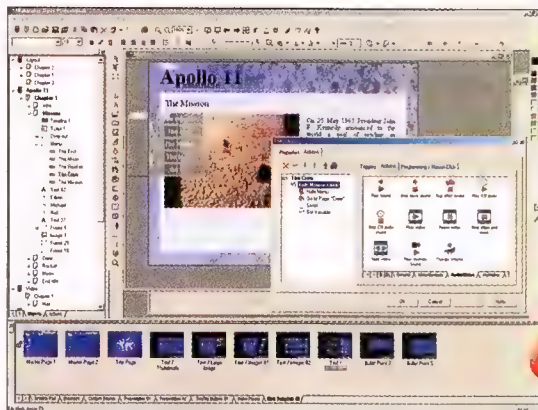
RATING  **Price:** \$659 **Contact:** Communicue **Phone:** (02) 9622 5624 **Web:** www.digitalworkshop.com

Illuminatus Opus Pro fills the middle ground between mere presentation tools like Microsoft PowerPoint and high-end authoring tools like Director. Whereas Director uses a timeline interface, Opus uses the book metaphor, so your presentations are designed one page at a time. You can add text, still images, video clips and audio. It also has vector tools to draw shapes. There are predefined script modules called Actions which you just drag and drop into place. These allow you to jump between pages, run media files, and easily create buttons and

mouse responses. The level of customisation here is excellent and covers everything most people could want in navigation and media control. And there is a Script Icon for hard-core programmers to write their own code using OpusScript, which is in effect JavaScript 1.1. Full ODBC database support is here, as well as Web and email connectivity. Of course, it lacks the higher-end 3D, accessibility and Web server tools of Director, as well as Director's sheer versatility (once you know how to program it). Nevertheless,

Illuminatus Opus Pro is a very well-rounded authoring tool, and at a much more affordable price than its high-end rivals.

— Philip Moore **PC U**



WE RECOMMEND

If you're serious about creating sophisticated multimedia applications with lots of video and sound, take the time to learn Director. However, Illuminatus Opus Pro does an excellent job for the price.

ALSO CONSIDER

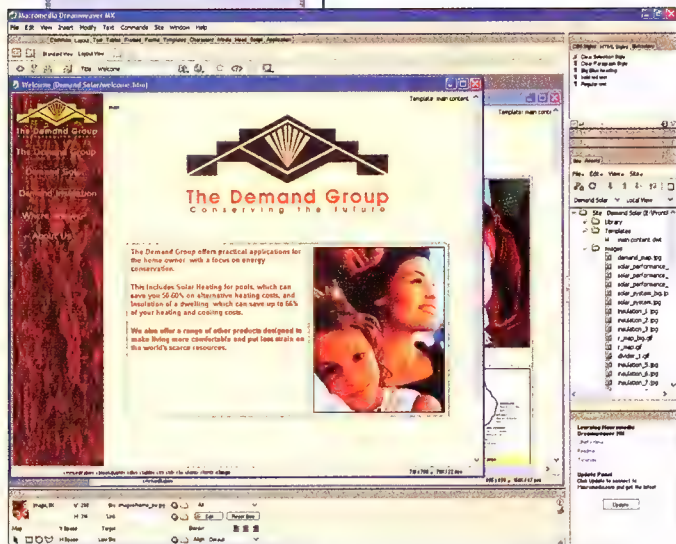
If you want to create multimedia training courses, consider specialist computer-based training products such as Macromedia Authorware or PPS Technology's IconAuthor. They have templates and other features specifically designed for your needs.



WEB AUTHORIZING

Macromedia Dreamweaver MX

RATING  **Price:** \$869 **Contact:** FirmwareDesign **Phone:** 1300 369 951 **Web:** www.macromedia.com/ap/



A Web authoring tool is a program that lets you build and manage a Web site. They generally work much like a simple DTP program, keeping you away from the source code as much as possible, while allowing you to edit this directly if necessary. Web sites are made up of much more than simple HTML nowadays.

There are Perl and CGI scripts, JavaScript, Flash and Shockwave, audio and video content, back-end databases and dynamic content requiring server-side support, ecommerce and even full-scale online applications and interactive games. You will need other tools to create the content and manage the higher-end server functions, but your authoring software should bring it all together.

It's surprising that before Dreamweaver there really wasn't a powerful design tool for serious Web developers, except advanced HTML editors like HomeSite. Dreamweaver therefore instantly became the industry standard. And it has maintained this position ever since, used by more serious designers than any other program.

It offers integrated file browsing, FTP and its

excellent template feature for easily updating elements across a whole site. Also bundled is HomeSite for serious code searching and replacing, and now there is the companion program, Contribute, which offers an easy, no-frills front end for people who want to update their Web sites themselves.

For advanced users, there is good support for dynamic data in pages and tight integration with ColdFusion MX for dynamic Web applications, along with ample support for other platforms like Sun Java, PHP and Microsoft .NET. Then, of course, there is the integration with other Macromedia tools like Fireworks and Flash.

Why you'd choose another product. As this is a professional tool, you don't get wizards and ready-made designs like in a consumer program like FrontPage. And while Dreamweaver is not hard to use, it is clearly not for people inexperienced in Web site design, or those who just dabble in it. Serious Web designers using other Adobe products should look closely at GoLive for its integration with the rest of the Adobe family, especially if you come from a design background rather than an HTML scripting one.

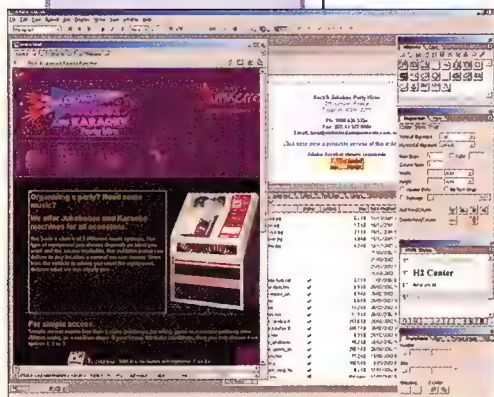
Why you'd keep using it. While a visual tool, Dreamweaver is nevertheless largely code-centric, which many developers appreciate. It is simply the most efficient tool around. Also, it's not tied to any proprietary formats and prides itself on creating HTML code that is lean and compatible with any browser or platform.

Macromedia also has the edge over rival Adobe when it comes to Web technologies, which makes Dreamweaver the logical choice if you are also creating Flash and Shockwave content, yet it integrates well with Adobe tools like Photoshop. Advanced JavaScript routines are easily created and coders will appreciate the Snippets window to store HTML, JavaScript or any frequently used code routines.

A top professional
Web design tool:
Adobe GoLive 2

Adobe GoLive 6

RATING  **Price:** \$930 **Contact:** Adobe **Phone:** 1300 550 205 **Web:** www.pacific.adobe.com

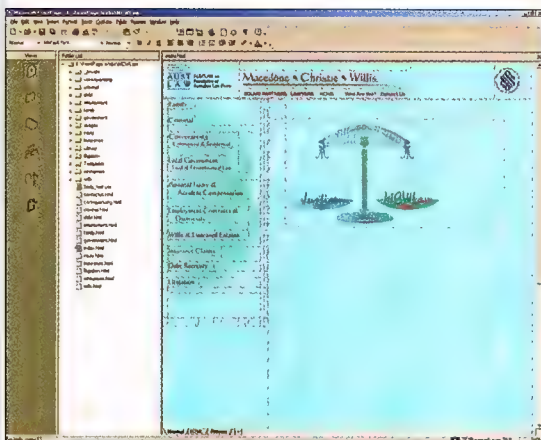


This is the other main contender for the title of best professional Web design tool. For many, the choice will depend on what other Adobe or Macromedia tools they have in their arsenal. GoLive appeals more to designers than HTML coders, although there is full access to edit HTML or JavaScript code available. Most objects from QuickTime to Flash SWF files can be dragged

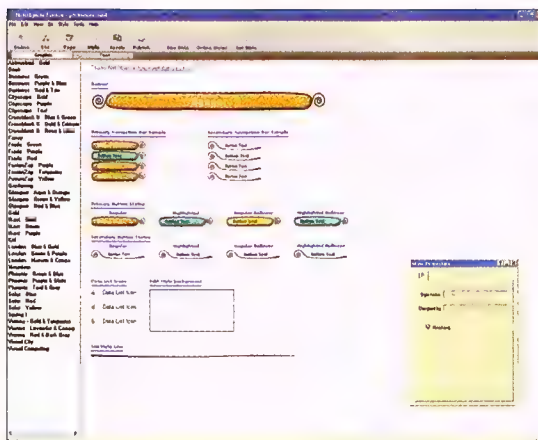
and dropped into place, and their properties then simply filled out. There is excellent built-in support for other Adobe tools, including the variables offered by Illustrator and ImageReady. Dynamic data (from a database) and workgroup collaboration are big selling points for those working on larger sites as part of a team, and Web Workgroup Server software is included in the LiveMotion package to help manage all this.

For those with more modest needs, frames and tables are handled very well. Creation of rollovers, low-res graphics and the like is all very easy. FTP access is built in, so you can update your site directly and save these settings.

The way palettes and inspectors are laid out is not as logical as one would hope in places. But this is a small quibble for the power at your disposal.



A good compromise: Microsoft FrontPage 2002



An easy design tool: NetObjects Fusion 7

Microsoft FrontPage 2002

RATING **Price:** \$347 **Contact:** Microsoft
Phone: 13 20 58 **Web:** www.microsoft.com.au

FrontPage is a popular choice for home users and small business, as it offers some very powerful features along with an intuitive layout, easy templates and built-in site management and publishing. There is an HTML view so you can see and edit the code if you want, full support for frames, image maps, form creation and Flash content. And while JavaScripting is not a feature of the program, you can add it readily if you are a JS programmer. You can also link to data from an Access database. But it is in the simple stuff that FrontPage stands out, making it easy to put together a good-looking site, even if you don't have a lot of experience. FrontPage is a good compromise between true HTML design and an intuitive layout tool for simple site creation.

NetObjects Fusion 7

RATING **Price:** \$299 **Contact:** Saratoga
Distribution Phone: (08) 8410 6855
Web: www.netobjects.com

This is the one to get if you want to design a good-looking Web site with advanced features, but don't want to deal with HTML at all. It uses a wizard which makes the process very straightforward, so you can create a rudimentary site in seconds. There is also support for some pretty high-end features like databases (Microsoft Access or ODBC), Shockwave (Director and Flash), video and audio. Actions can also be added, which offer JavaScripting features

and the ability to enter your own JavaScript code. Navigation bars and menus are easily made with multilevel menus and JavaScript pop-ups. Spellcheck and global search and replace is also included.

The one catch with Fusion 7 is that it works entirely in its own format; the site is converted to HTML only when you publish. It's more a design tool than a Web authoring tool, and provided you are content to do all your Web work in Fusion, it will serve the average user very well.

VCOM Web Easy Professional

RATING **Price:** \$120 **Contact:** Marketing Results
Phone: (02) 8852 4600 **Web:** www.v-com.com

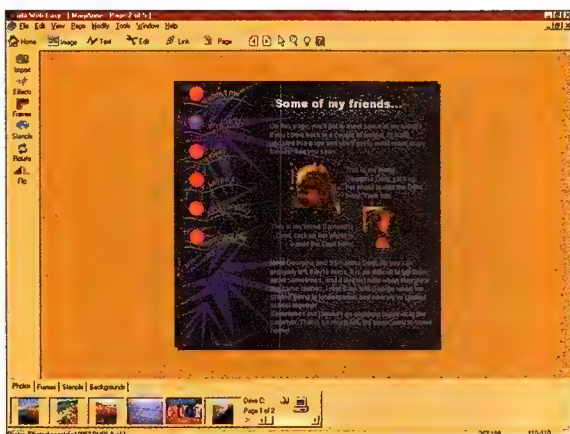
This is very much aimed at the average home user, and at a price most people can swallow. Like NetObjects Fusion above, it works in its own environment and you publish to HTML at the end, which is fine for a consumer package. There is a vast collection of textures, photos, clip art, sound effects, frames, stencils and other Web objects you can use within your own Web pages, with a simple drag and drop. Original images can be imported and some image editing and filter capabilities are built in.

You have quite a lot of freedom over how your pages will look. The downside is that the actual HTML code produced at publishing is chock-full of JavaScript. Web Easy is a good program for those

starting out with Web design. It keeps you well away from the code and lets you focus on design. But if you want to get clever with JavaScript or Flash, you'll need something more powerful.

— Philip Moore **PCU**

Good consumer package: VCOM Web Easy Professional



WE RECOMMEND

For serious developers, go with Dreamweaver MX as your first option. If you are coming from a design angle, however, and primarily use Adobe products, look seriously at GoLive. Either way, you can't go too wrong. For home users, FrontPage is the most versatile choice, but if that still seems a bit scary and complex, go with NetObjects Fusion.

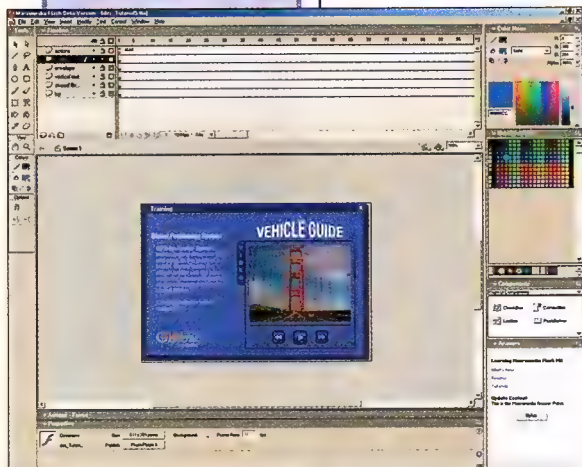
ALSO CONSIDER

HTML code editors such as HotDog Professional, CoffeeCup HTML Editor or Macromedia HomeSite are useful companion tools for experienced Web developers using visual design programs. However, you'd be hard pressed to use an HTML editor alone for creating anything but the simplest of Web sites.

1
PC USER
TOP BUY

WEB ANIMATION

Macromedia Flash MX

RATING **9** Price: \$1,099 Contact: FirmwareDesign Phone: 1300 369 951 Web: www.macromedia.com/ap/

Remember animated GIFs? Well, forget them. Web animation nowadays means Flash — either the original product from Macromedia or one of the several Flash clones available. Macromedia decided a while back to release the source code for the SWF file format. This means that anyone can create software that writes SWF files.

Flash is vector-based, so it compresses really well and produces very small file sizes for impressive content, which is great

for the Web. However, Macromedia's Flash has grown over the years to include bitmap images (like JPG photos), audio such as MP3 files and, most recently, video. It also includes a very comprehensive programming language for creating interactive applications. This makes Flash the great all-rounder for offering what pure HTML can't.

Flash MX is the industry standard because it invented this category, and had a few good years' head start on the competition. It offers full programming capabilities using ActionScript

(essentially JavaScript), server-side functionality, and with this latest MX release, integration with Macromedia's server application tool, ColdFusion, for dynamic content.

Flash's focus on server-side and dynamic content is great for corporate and high-end users. But there is still plenty here for those who simply want to create online animations and mini-applications. You can use it for forms pages that are much more intuitive than HTML forms, or interactive games, media players and applications.

Major Web developers will really appreciate the dynamic content features Flash MX offers. For others, the new support for video and scripted components alone make this a very worthwhile purchase, keeping Flash at the head of the game.

Why you'd choose another product. Flash is a powerful program that takes a lot of learning, and its strongest competitor, LiveMotion, is easier to use. If you have CorelDRAW Suite, its R.A.V.E. is quite good at creating simple but flashy animations. If you only want to create flashy banner ads and other simple text animations, cheaper tools such as SWiSH will do the job.

Why you'd keep using it. The biggest new feature in this MX release is video, and the compression quality is excellent. There is also support for prebuilt components, which makes it easy to create and reuse complex objects like media controls or scroll bars — something that has been surprisingly hard to do in previous versions. You can also download and install such components from the Macromedia Web site, ready to use. Flash also offers the best high-end server connectivity of them all.

Adobe LiveMotion 2

RATING **8** Price: \$985 Contact: Adobe Phone: 1300 550 205 Web: www.pacific.adobe.com

LiveMotion is a great alternative to Flash, and includes full ActionScript support. The key reason you would choose LiveMotion over Flash is its timeline. Based on their high-end video compositing software, After Effects, the timeline in LiveMotion is much more intuitive than that found in Flash. It also handles text and objects much better, being essentially After Effects Lite for the Web. The other reason is, of course, it is an Adobe product, so if you are using products such as Photoshop, GoLive or After Effects, then LiveMotion will fit into your workflow more easily. LiveMotion is easier to use than Flash in many ways, and for Web developers seeking to create standalone SWF animations or Web applications, this is now a genuine alternative to

Flash. However, more serious Flash developers will want the new features offered in Flash MX, which LiveMotion has yet to implement.

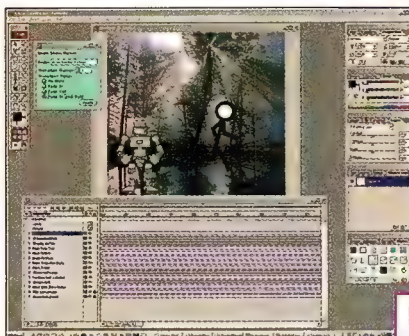
SWiSH 2.0

RATING **8** Price: \$US49.95 Web: www.swishzone.com

It's certainly not in the same league as Flash or LiveMotion, but this Australian-made tool is a great-value alternative if you want to start dabbling in text animation, and it's also a good companion tool for Flash users who need to do occasional rush

jobs. By offering a good range of templates, SWiSH makes it quick and easy to create great-looking banner ads and other text animations. You don't get the programmability and advanced functions of Flash, but you can customise your projects to some extent.

— Philip Moore **PCU**



Easy to use: Adobe LiveMotion 2

WE
RECOMMEND

If you want to be on the cutting edge, stick with the original Flash. If you don't need the high-end dynamic content and video, LiveMotion is easier to use. For simple text animations, check out SWiSH.

DEVELOPMENT PLATFORM

Microsoft Visual Studio .NET Professional

RATING  **Price:** \$2,200; upgrade \$1,108 **Contact:** Microsoft
Phone: 13 20 58 **Web:** <http://msdn.microsoft.com>

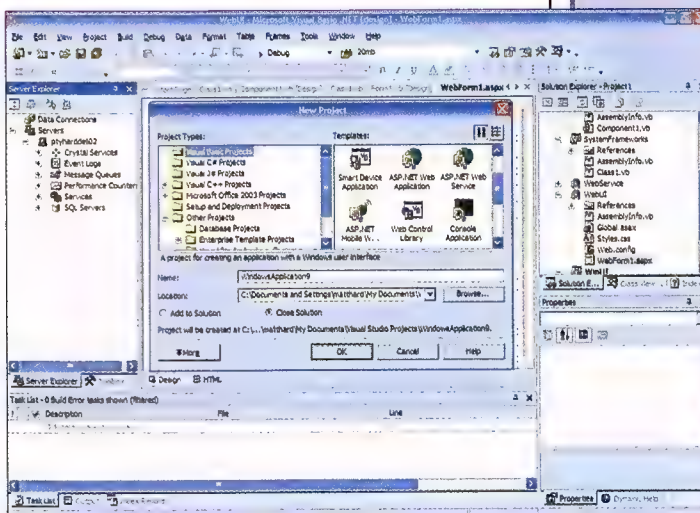
Although they're only employed by a relatively small percentage of users, development tools have a huge influence on the evolution of the software market and the popularity (or otherwise) of individual platforms. There are hundreds of products and tools available to assist with software development, and your choice would be heavily influenced by what you are trying to achieve and your planned delivery platform.

For general Windows applications, Microsoft has long been the dominant provider (after all, it knows more about the underlying Windows APIs than any other company). The release of the Visual Studio .NET package underscored that position by making all of Microsoft's key languages available in a single package.

Visual Basic is generally acknowledged as the world's most popular development environment, in large part due to its integration into Office. For professional developers, C++ has long been the environment of choice.

Visual Studio .NET incorporates both, as well as more obscure choices (including J#, a Java knock-off; and C#, a C++ derivative). This allows you to select the most appropriate language for any given environment while maintaining a single development environment. Even developers who only want to work with a single language will find the Visual Studio environment familiar from earlier releases.

Why you'd choose another product. Developers who want to create applications that run anywhere other than Windows won't find Visual Studio much help. J# is easy to learn if you're committed to Java, but it simply doesn't provide the cross-platform compatibility required. Even developing for Pocket PC devices can be tricky, as the platform is heavily desktop-centric.



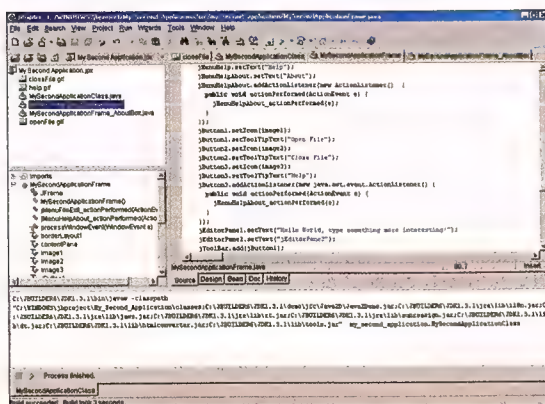
One other issue to bear in mind is that the recent releases of Microsoft's development environments have tended to be very bug-heavy in early releases (the beta cycle on development tools can run much longer than other applications). For this reason, we'd advise staying away from the relatively new 2003 release of Visual Studio for anything other than experimental and training purposes.

Why you'd keep using it. Developers who are already committed to one of Microsoft's existing platforms have little incentive to switch to another platform. There are the advantages of flexibility and familiarity to consider. Those who want to deploy Web services, which have been the focus of most of Microsoft's recent .NET initiatives, will also benefit from the close integration between Visual Studio and Microsoft's operating systems.

Borland JBuilder Standard

RATING  **Price:** \$799 **Contact:** Borland **Phone:** 1300 799 688
Web: www.borland.com.au/jbuilder

Although there are plenty of other Java development environments available — including tools from the language's inventor, and even the now-obsolete Visual Java from Microsoft — JBuilder remains the product of choice. Entirely written in Java itself, it scales easily from simple applications to complex enterprise deployments. It's in the latter area that it really shines, providing a far simpler interface to



some of the complexities inherent in any complex Java application. The Personal edition can be downloaded free, but this doesn't include the more complex enterprise extensions. While Java's foothold in pure Windows environments is sketchy, it remains the best-tested and most-used solution for developing applications to run in any kind of

mixed environment (including Macs and Linux, as well as enterprise Unix platforms and other devices). And because Borland also provides additional development environments, the skills learned here can be applied to other languages.

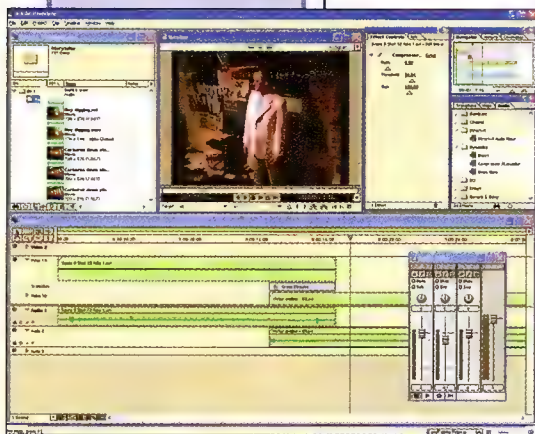
— Angus Kidman **PCU**

WE RECOMMEND

Selecting a development tool is complex, and personal preferences play a large role. Although Visual Studio offers a huge range of languages, most developers still make their initial choice based on the languages they already feel comfortable with. If you're working exclusively with Windows, there's no reason not to work with Visual Studio, and it may provide a relatively painless path to learning other languages as you need them. If, however, cross-platform Java applications form part of your plans, then Borland's product is a more logical choice.

VIDEO EDITING

Adobe Premiere 6.5



RATING  **Price:** \$1,355
Contact: Adobe
Phone: 1300 550 205
Web: www.pacific.adobe.com

Video editing software comes in all varieties, for everyone from new users up to professionals, but the aim is always the same. Capture footage from your camcorder, lay it out on a non-linear edit (NLE) timeline, apply transitions and other effects, then output it as a finished movie to a video file or to tape.

Avid is the choice of film and TV professionals, but this is seriously expensive gear. Premiere has for many years been considered the standard in the corporate video industry and among serious amateurs. It's robust, powerful and widely supported by video capture hardware.

Nevertheless, Premiere is starting to show its age, and its title is seriously challenged, with Apple Final Cut Pro on the Mac claiming much of Premiere's market, and Sonic Foundry Vegas Video on the PC.

With this release, Premiere offers real-time

editing and a proper title designer — and it's a good one, with full positioning, text and effect control. There are even some Illustrator-style drawing features with text on a path and basic vector shapes.

DVD and VCD authoring is built in, along with Sonic DvDit! integration for burning direct from the timeline, and several high-quality filters taken from Adobe's compositing tool, After Effects.

This is all great stuff, and it works like a charm. You can't go wrong with Premiere, but it's no longer leading the game.

Why you'd choose another product. Premiere is having a hard time shaking its old methodologies. Newer programs like Vegas Video have found a more intuitive approach to editing digital footage, offer more features, and make the most of faster processors. If you're getting into digital video for the first time, Premiere will be overkill — start off with an easier tool like Sonic Foundry VideoFactory. On the other hand, if you want to get into serious video effects, you'll need a companion compositing tool such as After Effects.

Why you'd keep using it. Many higher-end capture cards offer special real-time and effects support for Premiere. You could use other software, but you would be missing out on some of the card's more advanced features. Aside from this, the one thing Premiere has going for it is reliability. And if you use After Effects, it would probably make sense to stick with Premiere.

WE
RECOMMEND

For serious video editing, it's Vegas Video all the way. Combine with Boris RED for a very powerful (but not inexpensive) system. Adobe Premiere and After Effects is a solid, and cheaper, alternative. For home movies, VideoFactory 2.0 is the clear choice.

Pinnacle Edition 4.5

RATING  **Price:** \$1,550 (version 5) **Contact:** Pineapplehead
Distribution Phone: 1800 657 601 **Web:** www.pinnaclesys.com

Pinnacle Edition borrows from Pinnacle's high-end Liquid range (Purple, Silver and Blue), including their disconcerting way of taking over the Windows interface. We found version 4.5 lacking in some areas, but on the whole, it is a powerful, well-rounded program for capturing, editing and output, with a few neat differences. Transitions and effects offer excellent control, and Pinnacle's Title Deko provides excellent 2D and 3D text facility. We couldn't get hold of version 5 in time for this feature, but it will be available by the time you read this. It appears to be a major upgrade with impressive additions such as real-time processing and DVD authoring built in. It sounds promising, so stay tuned for a review soon.

Sonic Foundry
Vegas Video 4

RATING  **Price:** Standard, \$949; Vegas +DVD, \$1,399
Contact: New Magic **Phone:** (02) 9528 4555
Web: www.sonicfoundry.com

of handling transitions and filter effects. Also, coming from a company with a background in audio, it does the best job of sound of any video tool. You could even use it as a full audio mastering tool. Previews are in real time with no extra hardware support required, and there is support for dual processors and dynamic RAM processing. There are good templates for VCD, Super-VCD or DVD formats, and the new +DVD version offers full VCD/DVD authoring via the bundled version of DVD Architect, as well as the AC3 Encoder for 5.1 surround sound mixing. This means you can prepare full 5.1 soundtracks and burn these to DVD within DVD Architect. This latest release offers several new features like Video Bus tracks (an audio convention put to very creative use here), Advanced Colour Correction, Smart Resampling (to create smooth slow motions, for example), DirectX Effects automation and ASIO driver support, Split Screen Effects preview (for before and after looks), Scripting for automated tasks, and heaps of other great stuff. Our only quibble is that you still cannot export a clip as an image sequence.

Sonic Foundry
VideoFactory 2.0

RATING  **Price:** \$249 **Contact:** New Magic **Phone:** (02) 9528 4555 **Web:** www.sonicfoundry.com

VideoFactory is the little brother to Vegas Video and uses much of the same technology and interface

Rising star in video editing:
Sonic Foundry Vegas Video 4

style — but with a simpler approach for the average home user. Video and audio tracks offer automatic crossfades, and you can apply transitions and video effects with a simple drag and drop. The Make Movie wizard makes it easy to export your finished work to tape, file or direct to a VCD (there's no built-in DVD support yet). It lacks the advanced features of more professional programs like Vegas Video, and even the DVD support of Ulead VideoStudio 7, but it's still a powerful and flexible program for everyone.

Ulead MediaStudio Pro 7



Price: \$1,150 **Contact:** Pineapplehead Distribution
on 1800 657 601; Conexus on (02) 9975 2799

Web: www.asiapac.ulead.com

Like Premiere, MediaStudio Pro uses the traditional timeline interface with A and B tracks, and multiple overlays. Recent innovations include capture from your DV camcorder into MPEG in real time. You can preview in real time and there is support for 16:9 wide-screen video and 5.1 surround sound. You can also import Flash SWF format files, and MediaStudio Pro comes bundled with DVD Movie Factory 2 LE for direct export of your projects to VCD/DVD. There are easy drag-and-drop effects and presets for video and audio filters, motion paths (including 3D types) and transitions, and good keyframe control over most of these. MediaStudio Pro is a great alternative to Premiere, and offers many things Premiere lacks, but it suffers from the same inherent limitations and needs an overhaul.

Ulead VideoStudio 7



Price: \$220 **Contact:** Pineapplehead Distribution
on 1800 657 601; Conexus on (02) 9975 2799

Web: www.asiapac.ulead.com

VideoStudio has a more friendly approach to video editing than MediaStudio, which is getting a bit old and restrictive. The timeline supports up to two video tracks, plus two audio tracks and a titles track. There is limited control over the motion and effects on text and overlay channels. You can export your project, complete with simple DVD menus via the DVD wizard, directly to a VCD or DVD without having to pre-render files. You can also capture your footage directly into MPEG-2 format for DVD. While it's simple, this is a good all-round video tool, especially for those who want to convert their DV camera home movies to DVD. As long you're not too ambitious, it will serve you well.

COMPOSITING TOOLS

Adobe After Effects 5.5



Price: \$1,602 **Contact:** Adobe **Phone:** 1300 550 205 **Web:** www.pacific.adobe.com

Video compositing software is a cut above video editing programs, specifically designed for creating special effects using multiple video and audio tracks, graphics, 3D text and so forth. And After Effects is one of the most popular programs of this type, often used

for TV ads and music videos. The timeline is more object-oriented than a regular video editor. You can move around 2D objects (videoclips, still images and text) in a 3D environment. Camera and lights can also be moved in this space and you can view your scene from multiple viewpoints at once. It provides more than 90 effects and more can be added using plug-ins. JavaScript expressions provide powerful scripting control, plus coloured shadows and excellent control of light and layers in the 3D world. There is also a professional version of After Effects with advanced features such as motion tracking support. Being an Adobe product, After Effects integrates with Photoshop and Premiere as your media editors.

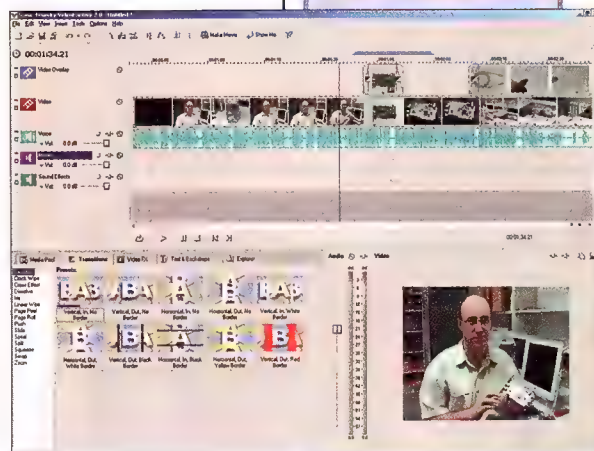
Boris RED 2.5



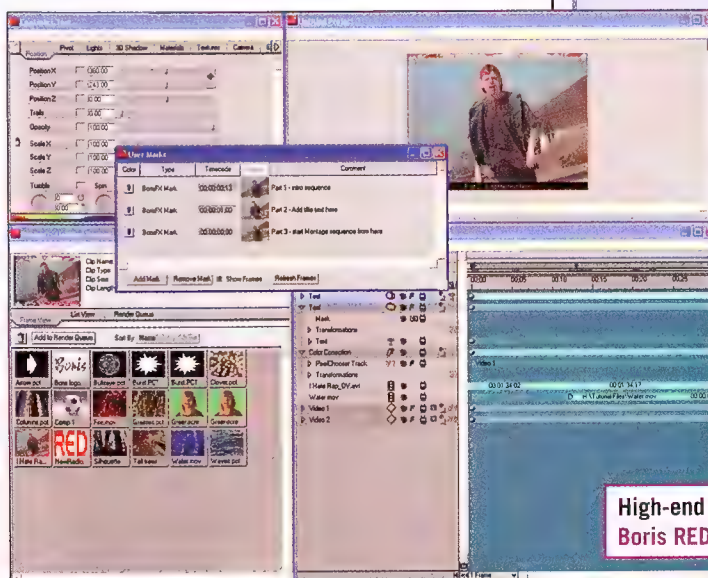
Price: \$3,575 **Contact:** Adimex **Phone:** (02) 9699 1088 **Web:** www.borisfx.com

For serious video editing, Boris RED surpasses the standard version of After Effects and in many ways is as good as or better than After Effects Pro, which is in a similar price bracket. Aside from being an excellent effects processor, Boris does vector painting and rotoscoping of video images, as well as motion tracking (great for matting 3D and video together) and has a host of other high-end features. Text features are excellent and there are some nice touches to the timeline to improve productivity. Boris RED has plug-in support for Vegas Video and is a powerful tool for multimedia, broadcast TV, commercials and music video special effects.

— Philip Moore **PC U**



Easy editing for
home movies:
Sonic Foundry
VideoFactory 2.0



High-end features:
Boris RED 2.5

DVD AND VCD AUTHORIZING

Ulead DVD Workshop 1.3 AC-3

RATING **8** **Price:** \$1,140 **Contact:** Pineapplehead Distribution
on 1800 657 601; Conexus on (02) 9975 2799
Web: www.asiapac.ulead.com

Tools for burning VCD and DVD discs, complete with interactive menus, make up a relatively new category of software. They're the new cool toy for creating your own DVD movies using a DVD burner.

The industry's choice is the high-end range of tools from Sonic, but it's strictly for professionals and priced accordingly. For the rest of us, it's too early to say which program will become the market leader. At the moment, DVD Workshop is the best thing around, filling the middle ground between consumer DVD authoring and the high-end tools.

It will write VCDs and Super-VCDs on a CD-RW drive, as well

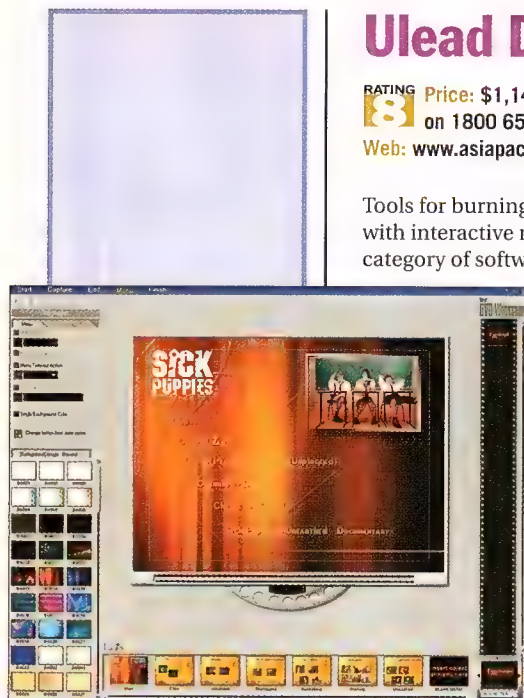
as DVD discs to a DVD burner. It offers a simple step-by-step interface for capturing or importing your clips, editing them to size, preparing a menu, and then outputting to disc. It can also convert them to the appropriate MPEG format before a burn, if necessary.

There are motion menus where you can have backgrounds and buttons created out of MPEG movie clips, and virtually unlimited branching submenus. It also supports AC3 audio files for 5.1 surround sound.

You can capture directly into MPEG format from your DV camera, thus saving heaps of disk space. There are also automatic scene splitting and batch capture options.

Why you'd choose another product. Professional DVD makers may want even more power, such as Sonic Scenarist and/or DVD Producer. If you are out to create DVDs of your home movies, there are several excellent (and cheaper) tools available, including those below.

Why you'd keep using it. For now, DVD Workshop is the best midrange authoring tool.



Keeping it simple:
**Sonic MyDVD
Video Suite 4**

Pinnacle Expression

RATING **7** **Price:** \$135 **Contact:** Pineapplehead Distribution
Phone: 1800 657 601 **Web:** www.pinnaclesys.com

This entry-level DVD authoring tool allows you to create VCDs, Super-VCDs, or DVDs of your home movies. You can also use it to create a slideshow of your digital stills, with titles and background music.

Several good templates are provided for your menus, and you can custom build your own. Individual clips can be split into scenes, but there is no function to crop or edit clips in any other way. Expression also offers handy things like a 'return to menu' feature, motion menus (backgrounds only), and automatic custom bitrate settings that allow you to fit everything onto a disc at the best quality possible. This is a very easy program to use and it does all the hard work for you.

the space bar. Menus may contain unlimited nested submenus. They can be animated as MotionMenus, and there are several impressive templates to choose from, which can be customised. These motion menus need to be rendered first when previewing your project, but this is still the best implementation in a consumer program we have seen so far.

The Suite edition includes a video editor, ArcSoft Showbiz, which is quite effective for simple projects. It provides text overlay, transitions, effects and two audio tracks. You have less control than in other programs, but then that's the whole point of MyDVD — keeping it simple.

Ulead DVD MovieFactory 2

RATING **8** **Price:** \$135 **Contact:** Pineapplehead Distribution
on 1800 657 601; Conexus on (02) 9975 2799
Web: www.asiapac.ulead.com

This is a great entry-level tool for those wanting to put their home movies on disc. With the Disc-Direct feature, you pick a menu template and then the program does everything else for you — capture, arrange and burn. This is great for transferring raw footage directly from your camera to disc. You can also reuse the movie files from a disc you have burned for later refinements or compilations, or do a straight DVD disc copy (of your own material, not commercial DVDs). There are heaps of templates to choose from, or you can customise these with your own graphics. DVD MovieFactory doesn't do multilevel menus, or motion menu backgrounds and buttons, but it is easy to use and works a treat.

— Philip Moore **PCU**



**WE
RECOMMEND**

Serious DVD authors should go with DVD Workshop or one or more of Sonic's high-end tools such as Scenarist. For home movies, we recommend Sonic MyDVD.

Sonic MyDVD Video Suite 4

RATING **9** **Price:** Video Suite, \$189; Media Suite, \$239
Contact: Adaptec Australia **Phone:** (02) 9416 0687
Web: www.mydvd.com

Sonic makes some excellent tools for the home user. They're easy to use and have a wizard interface to guide you through the process.

MyDVD does not support the more esoteric formats like Super-VCD or Mini-DVD. You can transfer footage from your DV camera 'direct to disc' for a quick solution, adding chapter points with a press of

CD BURNING

Roxio Easy CD & DVD Creator 6

RATING  **Price:** \$129 **Contact:** Tech Pacific
Phone: 1300 657 774 **Web:** www.roxio.com

CD burning software has become one of the staples of modern computing. It can burn audio and data CDs, as well as several hybrid and mixed-mode formats. It also generally includes a packet writing program for rewriting to CD-RW discs. Most programs go beyond this now and offer VCD and DVD authoring features, audio CD mastering tools, and companion programs from CD cover art designers to media managers.

The two clear leaders in this market are Nero Burning ROM and Roxio Easy CD Creator. For the moment, the latter has just edged ahead, thanks to this new release.

Among Creator's new features is DVD Builder, a complete DVD authoring tool, which is not as versatile as some dedicated tools but still pretty good for an all-in-one suite like this. It can capture direct from your camcorder, and includes some good basic editing features such as clip trimming, extra audio tracks, and a menu maker. You can create slideshows with transitions and burn the results to DVD+R/-R or VCD.

The main section of the program has been renamed Creator Classic, and from here you create audio or ROM discs, mixed-mode, MP3, enhanced and bootable discs. You can also create data backups to CD-R or DVD-/R discs, spanning a backup over

several discs. The disc copier lets you copy all manner of CDs, as well as your own DVD discs. It will also now copy in RAW mode for direct copies with drives that support this mode.

The audio cleanup features have been beefed up and renamed Audio Central, now with a Media manager and player, and WAV editor application. The imaging program PhotoSuite LE 5 is also included, to help you create CD labels and covers, but this is also a pretty good little all-purpose image editor in its own right.

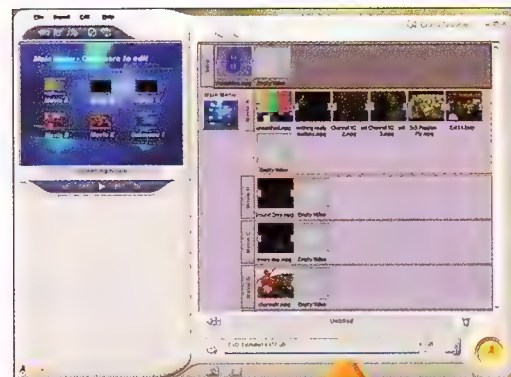
It was a long time coming, but this latest version of Creator is very good, and should do just about anything most people could want.

Why you'd choose another product. There are some advanced features that Easy CD Creator still doesn't have. Some people may want even more processing tools to clean up audio for CD, or a dedicated tool for audio CD mastering and DVD authoring. And if you're happily using Nero, it may not be worth the switch.

Why you'd keep using it. This version looks and works even better than the last one. And for many people, the companion tools would serve just fine, or at least introduce the concepts of DVD authoring and WAV editing.

included, as well as a jewel case artwork maker and media player, and File CD for packet writing to CD. It will burn MP3 and WMA data/audio discs, as well as record audio live—that is, burn on the fly from a live audio source. Unique to this Platinum Edition is a Custom option, which allows you to burn one or more ISO or RAW image files as separate tracks. You could, for example, create an enhanced CD which was also a Mac/PC hybrid disc—something not possible in most other programs. On the video side, you can create VCDs and Super-VCDs, or still image slideshows in either format. This is much more basic than dedicated authoring tools. This is a comprehensive and easy-to-use program. It lacks in some areas, but it makes up for it with its Custom Advanced mode and bundled tools.

— Philip Moore 



WE
RECOMMEND

Roxio Easy CD & DVD Creator. It has everything most people need and then some. However, our recommendation may change with the release of the new version of Nero, which is due out soon. Also, there may be better tools available for specialist needs, such as making your own audio CDs or DVD movies.

Nero Burning ROM 5.5 Pro

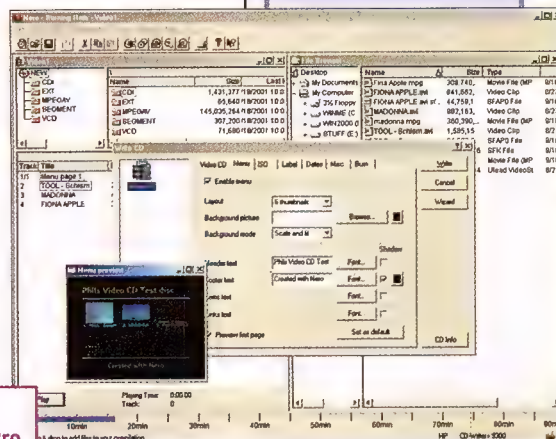
RATING  **Price:** \$199 **Contact:** Communicate **Phone:** (02) 9622 5624 **Web:** www.nero.com

Nero has become the CD-R software of choice for many people. It supports a vast range of drives, and is keeping abreast of the cutting-edge technologies via regular Web updates. For standard CD-ROM or audio CD creation, Nero is a dab hand, accepting MP3 and WMA files and converting them on the fly. It offers a good range of options and features for these styles of discs. It is also very good at creating VCDs and Super-VCDs, and (with a downloadable plug-in) DVD. It's no competition for a dedicated DVD authoring tool, but it does support burning to DVD-R drives in ROM mode for data backup. It handles audio CD creation very well, and has good controls for gap, crossfades and audio effects. It's not quite a mastering tool, but it's pretty good for a CD-R application. It's easy to use and has a comprehensive suite of tools. Stay tuned for version 6.0, which is due out soon.

NTI CD-Maker Platinum 6

RATING  **Price:** \$99.95 **Contact:** Quadtel **Phone:** (02) 8852 4600 **Web:** www.ntius.com

This is a good all-purpose CD-R tool. A WAV editor is



Comprehensive and easy to use: Nero Burning ROM 5.5 Pro



The **PC User** team sniffs out the very best deals on the Net.

Turn your DJ fantasies into reality with Ots Labs CD Scratch.



ON THE CD

Check out our Freeware Software Mega Pack, which includes all the great freeware bargains mentioned here:

602Pro PC Suite 2001;
OpenOffice.org 1.0.3;
ATO E-Record 2.0.2;
MySQL 4 Database Server; TreePad 2.6.9;
Zwei-Stein Video Editor;
The Gimp 1.2.4; Oriens Enhancer GOLD 2.6;
Audacity 1.0; Ots Labs CD Scratch 1200 1.00;
CityDesk Starter Edition 1.0.31; Webmaster 3.0; Internet Explorer 6; Netscape 7.02; Mozilla 1.3.1; Opera 7.11; Eudora 5.2; Pegasus Mail 4.11; and Crazy Browser 1.05.

The 50 best bargains online

AUCTIONS

eBay www.ebay.com.au

Of all the online auction sites, you are more likely to find (or sell) your things at eBay. It takes a while to learn the tricks, but that's half the fun. Just be careful to check the starting price of an item is not higher than you can buy it in the shops, or whether it will be delivered from overseas, attracting high delivery and duty charges. One extra word of warning: eBay can become addictive, and some users even make their living out of being an eBay merchant.

— Paul Zucker

Hymans Online Auctions

www.hymans.com.au

While online auctions are popular, there's always that fear about dealing with dodgy goods or their sellers, especially overseas. Hymans auction site avoids these issues, as it is an established local auction company that specialises in disposing of IT assets from the government, as well as bankrupt stock. You can check out the prices of previously auctioned gear or register to bid. Also check out the locale of the goods, as it's easier and cheaper if the systems you are bidding for are nearby.

— John Hilvert

AUDIO SOFTWARE

Audacity <http://audacity.sourceforge.net>

If you're looking for an audio sandpit on the cheap, try Audacity. This neat little app records, plays, imports and exports sounds. Mix tracks together, apply sound effects and twiddle with the amplitude envelope editor. It comes with several built-in effects and supports VST plug-ins. For pure audio fun, it's hard to beat the Aussie-developed Ots Labs CD Scratch 1200 (www.cdscratch.com). With this dual-turntable DJ desk, you can 'spin' two tracks at once, cue tracks, scratch and play tracks in reverse, and generally live out your DJ fantasies in the comfort of your own PC.

— Rose Vines

Cool Edit www.syntrillium.com

On the shareware front, Cool Edit has been around since Windows 3.1, but it continues to be our favourite stereo audio editor. Professional enough to handle up to 96kHz sampling and 24-bit resolution,

Get sound advice on all things vehicular, from NRMA.

Cool Edit 2000 can be expanded with optional plug-ins.

On its own, it can add reverb, flange, chorus effects as well as FFT (Fast Fourier Transform) filtering. It works with any dual-channel soundcard and there's a four-channel plug-in available. Definitely a bargain at about \$69.

— Darren Yates



AUTOMOBILES

MyNRMA www.mynrma.com.au

MyNRMA gives motorists in NSW all kinds of handy information about cars and road travel. If you're in the market for a new car, check out the site's automotive reports and road tests — you need never buy a lemon again. You can also save on unnecessary trips to the mechanic by reading NRMA guides to simple car maintenance. If you want to get away, you'll find a variety of online maps, you can book a hire car, or check out accommodation recommended by the NRMA.

— Anna Raciti

BOOKS

Advanced Book Exchange

www.abebooks.com

Whether you're after a signed Jane Austen first edition, or a mint copy of a *Green Lantern* comic, Advanced Book Exchange is an excellent place to shop. It claims to be the world's largest online marketplace for used, rare and out-of-print books, and with a database of over 40 million titles, that claim may well be justified. Search results are presented with prices (in US dollars), so you can quickly see whether a bargain is to be had.

— Rose Vines

Biblion www.biblion.com

This British-based counterpart to Advanced Book Exchange is the online extension of the West End store,

TOP 50
ONLINE
BARGAINS

STEP BY STEP: FREE NEWS ARCHIVES

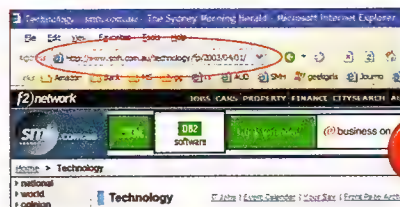
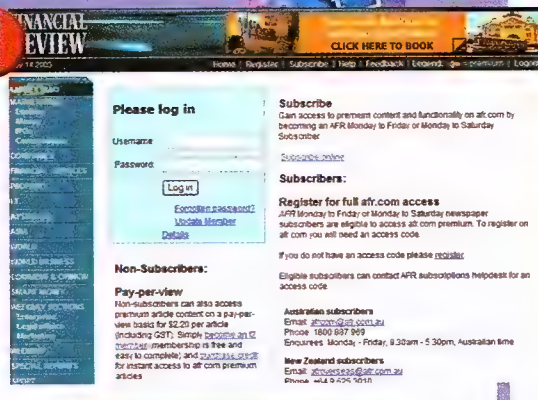
1 Don't want to pay for archived stories on newspaper sites? Some enlightened newspapers, such as the *Australian Financial Review*, give you free access to archived stories on their sites if you subscribe to the print editions.

2 But for real cheapskates, Google is the go. Use it to search for the topic, followed by the name of the newspaper in quotes (for example, Wi-Fi "Sydney Morning Herald"). It's messier but usually gives you a direct link to the full story.



3 Alternatively, some sites use a logical URL structure which makes it easy to find the stories you want. For example, www.smh.com.au/technology/fp/2003/04/01/ is the technology section front page for the April 1, 2003 edition of the *Sydney Morning Herald*. By searching for your topic on the SMH site, you can find out in which edition and section the target story is published. Then type in the URL for the front page of the appropriate section and edition, and follow the link to the target story.

— Glenn Rees



Biblion. Biblion — the offline version — provides space for over 100 booksellers in nicely upmarket surroundings. Biblion.com houses the book databases of many more sellers than that, with around 3 million items from 500 dealers. The site puts you in direct contact with the original sellers, with no intermediate markup on prices.

— Rose Vines

BibliOZ www.biblioz.com

Aussie-based BibliOZ dubs itself the 'magic portal to millions of out-of-print books'. Bibliophiles searching for long-lost classics, or even more recently deleted titles will no doubt agree. Search by author, title or keyword for books stocked by bookstores around the globe. Search results clearly identify whether the books are available in Australia or overseas, with prices given in both Australian and US currencies. A PowerSearch restricts your searches to books located in Australia, so you can save on shipping costs.

— Rose Vines

BookFinder www.bookfinder.com

BookFinder consolidates the services of other book locating sites such as Advanced Book Exchange, Alibris and Biblion, giving you the best possible chance to track down a long-lost favourite. It probably has the least polished look of all the book-finding services, but it provides plenty of detail about the matching titles in its reports. Click a book's price to be taken to the hosting site.

— Rose Vines

Project Gutenberg

<http://promo.net/pg/>

Free books. That's what you'll find at Project Gutenberg. They're all in electronic format and all out of copyright, which is why they're available free of charge. Use the online search box to track down

a particular text and then choose a download format — text or Adobe Acrobat (PDF). Of course, copyright laws differ from country to country and works that are still protected in, say, the US, may well be out of copyright in Australia. So make sure you visit Project Gutenberg of Australia (<http://gutenberg.net.au>), where you'll find additional texts not available at the main site.

— Rose Vines

BROWSER & EMAIL FREEBIES

Browsing and email are so central to our everyday lives, we're fortunate Microsoft turned it into a freebie free-for-all. Take your pick of gratis browsers: Internet Explorer 6 (www.microsoft.com/ie/); Mozilla 1.3 (www.mozilla.org/); Netscape 7.02 (www.netscape.com/download/); or Opera 7.11, which is free with ads (www.opera.com/download/). On the email front, as well as the email clients included with the free browsers, the ad-supported version of Eudora 5.2 is free (www.eudora.com) and so is Pegasus Mail (www.pmail.com/downloads_nz_t.htm).

— Rose Vines

COMPUTER HARDWARE

AMD Athlon XP 2200+

www.amd.com

If you're looking for the best bang-per-buck processor on the market, don't go past the Athlon XP 2200+. At about \$190, it packs in far more horsepower than any Celeron or Pentium 4 chip for the same price, and is better value >>>

TOP TIP Exchanging rates

If you regularly search for bargains on overseas sites, bookmark the Universal Currency Converter at www.xe.com. Its home page provides up-to-the-minute cross rates for the Australian dollar, US dollar and Euro, while the quick currency converter converts amounts between any currencies.



Looking for ROMs?
You'll find them at
EmuChina.

ONLINE BARGAINS

than faster chips. Add in some DDR memory and a reasonably decent graphics card, and the 2200+ is great for everything from 3D gaming to video editing. Mate with a nVidia nForce2-chipset motherboard for best performance.

— Darren Yates

EmuChina

www.emuchina.net/index-en.htm

Emulators have been the rage for the past few years, mainly because they enable us to simulate old-school computers and consoles on modern day PCs. The only problem is that emulators need ROMs to work. This is a good site to locate these ROMs, as it offers over 160G of ROMs for various emulators, although you'll need to sign up to access the download area.

— Joshua Rodriguez

YeahDone www.yeahdone.com.au

This memory supplier has some of the cheapest prices around on desktop and notebook RAM, USB memory keys, memory cards (CompactFlash, Memory Stick, SmartMedia, MultiMediaCard, SecureDigital and xD-Picture Card) and card readers. Shipping is fast and cheap, with many delivery options to choose from, including pickup if you live nearby. Payment is via Paymate (www.paymate.com.au) using a credit card. It also provides lifetime warranties on all memory modules, with at least a one-year warranty for all other products.

— Olga Jevdic

COMPUTER HELP

Astalavista.box.sk

<http://astalavista.box.sk>

We all know what a pain it is trying to get a program working without its registration key. This is especially so when you've forked out hundreds of dollars on a high-end program and can no longer find the serial number. An easy way to reactivate the software is by visiting this site. Cracks.ws offers a search engine that may help you activate or 'fix' programs you own. It offers links to serial numbers and fixed executables that help you overcome the need to search for lost registration numbers.

— Joshua Rodriguez

Microsoft Support Knowledge Base

<http://support.microsoft.com>

Discover everything you ever wanted to know about why your Microsoft product doesn't work properly at the Knowledge Base. This site leads to secret software, astounding fixes, deep insights into how Microsoft products work, and the collected wisdom of thousands of Microsoft tech support people. It is also the place phone tech people go to when they say "please hold for a moment". Next time Windows or one of Microsoft's programs throws up a strange message, you'll know where to head.

— Paul Zucker

Darren, the cable guy, will help you through the broadband maze.



OzCableGuy www.ozcableguy.com

Thinking of going broadband? Trying to solve a cable modem or ADSL problem? Hunting for reviews of routers or other broadband hardware? OzCableGuy is the premier technical resource for Australian broadband. It's chock-full of solid advice, tutorials and FAQs. Darren, OzCableGuy's Webmaster, is a hands-on expert who installs and troubleshoots broadband installations and LANs for a living. He's informed, expert and opinionated. The OzCableGuy Web site shares Darren's practical experience with us mere mortals, free of charge.

— John Hepworth

VCDHelp.com www.vcdhelp.com

If you're an avid multimedia buff and would love to learn how to convert your home movies to different formats, for viewing on your PC or a component DVD player, drop by this site (mirrored at www.dvdrhelp.com). It offers an abundance of information including illustrated step-by-step tutorials, reviews and technical information. It also hosts a forum and links to freeware video editing programs.

— Joshua Rodriguez

Whirlpool www.whirlpool.net.au

Whirlpool is an excellent example of a knowledgeable group of people with a common interest, working in conjunction with a dedicated site provider. In this case, the common interest is broadband Internet access in Australia. Whirlpool allows users (and potential users) to compare ADSL and cable Internet services around the country, hear which ISPs are doing right or wrong by their customers, and learn how to best exploit a broadband connection (such as by sharing it within a network).

— Paul Zucker

Woody's Watch

www.woodyswatch.com

Woody Leonhard has been using Microsoft software and writing authoritatively about his experiences for donkey's years. Together with a fine group of writers, he puts out a collection of email newsletters on Windows and Office which are well worth reading. There's Office Watch, Windows Watch, Access Watch, Project Watch, Office 2003 Watch, and Office for Mere Mortals. Subscribe for free to a single newsletter or to the whole bunch of them.

— Rose Vines

DATABASE FREEBIES

MySQL

www.mysql.com/downloads

Database software takes itself so seriously it rarely

TOP TIP
No hand holding
There's a ton of freeware that's well worth the download, but one thing you shouldn't expect for nothing is support. Almost all freeware comes with no technical support other than the included documentation, if that. If you're not accustomed to fending for yourself with software, you may find it more economical, or at least less frustrating, to purchase a shareware or commercial program that comes with some level of free technical support.



STEP BY STEP: INSTALLING OPENOFFICE.ORG

1 OpenOffice.org gives you a complete office suite for free, but the download weighs in at over 50 megabytes, so make sure you have a fast connection. A shortcut to the latest stable version can be found at <http://public.planetmirror.com/pub/openoffice/stable>, click the folder for the most recent version (not the beta) and then click the Win32Intel_install.zip file in the list.

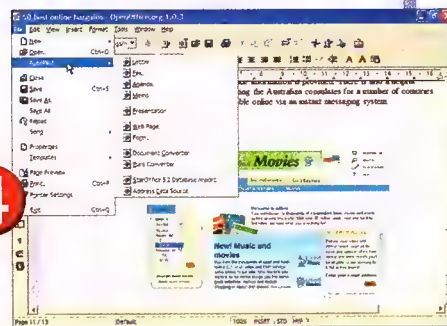
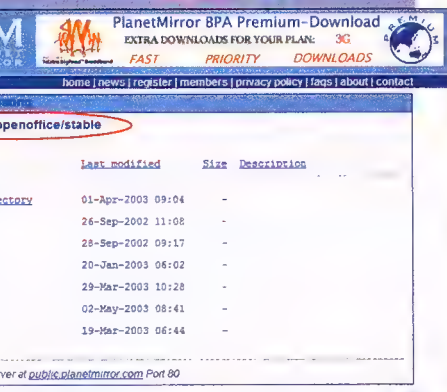
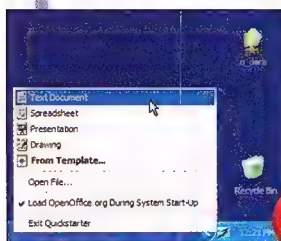
2 Once you've downloaded the ZIP file, extract it, read the readme.html file and then run setup.exe. Make sure you read the licence agreement, so you understand the limitations of open source software. Unless disk space is tight, opt for the Standard installation. After you've installed the



program, delete the installation files.

3 Gain quick access to OpenOffice.org components via the system tray icon.

4 You'll find much that's familiar in the OpenOffice.org components, plus plenty of surprises. Try out the ultra-fast autocomplete feature and check the File → AutoPilot menu for templates and other shortcuts.



turns up as freeware. But there is one very notable exception: MySQL. MySQL is open source software, licensed under the GNU General Public License. That means you can use it for free, provided you stay within the terms of the licence. MySQL is not for database dabblers. This is heavy-duty software which requires an understanding of Structured Query Language (SQL) and database servers. If that sounds intimidating, at the other end of the spectrum is TreePad Lite (www.treepad.com/treepadfreeware/), a simple organiser/PIM/database that will help you organise your documents, notes and links.

— Rose Vines

FINANCIAL FREEBIES

For payrolls of five employees or less, a fully functioning version of Logisoft e-PayDay Freepay (www.logisoft.com.au) is offered absolutely free. And if you grow beyond the five-employee limit, you can seamlessly move up into the other levels of the product. KwikPay (www.kwikpay.com.au/au) also offers its software free for those with a payroll of five employees or less. All you have to do to qualify for either of these excellent freebies is register at their respective sites. And for businesses, the Australian Tax Office's electronic record-keeping package, E-Record, is available for download (www.ato.gov.au/content.asp?doc=/content/businesses/23229.htm).

— Kurt Best, Helen Bradley & Rose Vines

FREE MONEY

FIDO

www.asic.gov.au/FIDO/fido.nsf/byheadline/Looking+for+lost+money%3F?openDocument

This is just one of a number of Australian Web sites which list money sitting unclaimed by the

rightful owner. (This federal site also points to the various state sites.) The money might be from old bank or superannuation accounts, from deposits made on electricity accounts, and even money that has been left in wills. If you have ever received a friendly letter telling you that you may have money coming to you, this is probably where they got the information.

— Paul Zucker

FREE STUFF

Free Stuff for Australians

www.ifree.com.au

There's nothing more disappointing than discovering a great deal on the Net, and then realising it's a bargain only if you live within the confines of the US. On Free Stuff for Australians, there's no need to worry about that. Each link leads to a site which, if not Australian itself, makes its freebies available to us in Australia. You'll find sporting goods, greeting cards, jewellery, magazines and a whole lot more.

— Rose Vines

FREWARE

Completely Free Software

www.completelyfreesoftware.com

It may seem contradictory to fork out a membership fee in order to download freeware, but >>>



FIDO points to sites that have lists of unclaimed money. Is your name there?

TOP TIP

Hidden costs

When buying from overseas sites, as well as factoring in exchange rates, you need to keep other costs in mind, too. Shipping charges can wipe out any savings you make by buying overseas, and on some items you may even have to pay duty or tax when they enter Australia. If you're not sure whether you'll be up for duty, visit the Australian Customs Service site (www.customs.gov.au) or give them a call on 1300 363 263.



Completely Free Software definitely makes the outlay worthwhile. Join for a month (\$US5), a year (\$US15), or a lifetime (\$US35) to gain access to probably the best freeware resource on the Web. Not only does CFS house nothing but nag-free, ad-free freeware, it also independently reviews and rates every single program.

— Rose Vines

TuDogs www.tudogs.com/home.php

There is a lot of downloadable software out there, but finding the best programs at the best price is always a challenge. TuDogs calls itself 'the ultimate directory of gratis software' so it takes care of the price issue by only recommending free software. It also lists free online services, though these sometimes turn out to be ads. As with all 'free' services, use your own judgement and make sure you are not going to install something which later

turns out to be fed with dollars.

— Paul Zucker

FREWARE GAMES

Orisinal www.ferryhalim.com/orisinal

Looking for some gently-paced entertainment to delight your youngsters? Visit Orisinal. All you need is a browser with the Flash player installed (there's a link to the download at the site). You'll then be able to play any of over 40 games from Bubble Bees to Penguin Panic. They're all free and they're all delightful. Some take a little practice, some are suitable for older children. Take your time to look around and be beguiled.

— Rose Vines

HEALTHCARE

Discount Natural Health Products

www.discountnaturalhealth.com

This site may not be much to look at, but it's a great place to find vitamins or health-related products at affordable prices. Vitamins, minerals, aromatherapy, weight-loss products and all sorts of natural remedies are available at below recommended retail prices. You can also access free naturopathic advice online — visitors are invited to email the resident naturopath for advice, or subscribe to the site's newsletter for regular health and nutrition tips. The site delivers to locations throughout Australia and New Zealand.

— Anna Raciti

WebMD www.webmd.com

WebMD is a treasure house of free information about illness and wellness. Its extensive medical library offers details on everything from dyspepsia to trigeminal neuralgia. Thousands of topics are covered in depth, tracing

cause, symptoms, risk factors, treatment, prevention, home treatment and resources. The online support forums get you in touch with fellow sufferers and with experts in the field. It may not be a substitute for your doctor, but WebMD provides a solid dose of relief at an unbeatable price.

— Rose Vines

IMAGE EDITING FREEBIES

Image editing software is one of those categories where you usually seem to have to pay for what you get. There are plenty of shareware utilities, but few full-blown freeware applications. But that's not to say you won't find a bargain if you look hard. Two excellent freebies are The Gimp (www2.arnes.si/~sopjimo/gimp/) and Oriens Enhancer GOLD 2.6 (www.oriens-solution.com/downloadOE.asp).

Both of these graphics editing programs provide an extraordinary array of power and options for free. On the video editing front, give Zwei-Stein Video Editor (www.thugsatbay.com) a whirl.

— Rose Vines

MUSIC & VIDEO

DVD Plaza

www.dvdplaza.com.au

Hunting for a special DVD or the best prices for mainstream movies? Tired of going from one online vendor to another? DVD Plaza's Price Crawler is a fantastic solution. It hunts through over a dozen online stores for a desired movie, and lists a few of the lowest prices it finds. The DVD Shopping page has information about the various online stores. Other areas have DVD and music reviews, press releases, discussions in member forums, and the latest DVD announcements.

— John Hepworth

EzyDVD www.ezydvd.com.au

EzyDVD always has a number of specials on the home page, along with current and upcoming releases. A search facility is provided and each DVD has its own page, with a synopsis of the film and special feature details. EzyDVD has a free delivery policy for orders of two or more DVDs, or \$1.50 for a single DVD (a courier option is also available), and free shipping on any pre-ordered DVDs. You won't be charged until your order has been shipped.

— Olga Jevdic

NEWS

ABC www.abc.net.au

There are many online news services, but none serves Australians better than the ABC Web site. It draws together national, state and local radio

Orisinal has games for the young and not so young.

proudly presenting...

completely FREE software
bringing you the best freeware on the web

— click on the heading above to access this site —
(if you experience problems accessing this site, turn off your ad blocking software)

This subscription-based site is your portal to first-rate freeware.

TOP TIP

Baggageware

Many freeware and adware authors make money by piggybacking other applications on their software. Such software is frequently termed spyware because of the stealthy way it may be installed, or because it monitors your computer activity in order to serve you relevant advertising. You may have no objection to this, especially if it means you get a great program for free. If you do object, though, avoid such baggage by carefully reading all licences before installing freeware.





STEP BY STEP: FINDING BOOK BARGAINS WITH BIBLIOZ

1 The BiblioOZ home page features a simple search box where you can search by title, author or keyword. If all you remember is a few words of the title, that's likely to be enough.



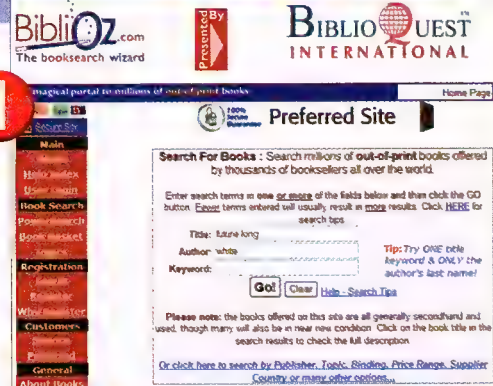
2 The results show you books from around the world, with prices in both Australian and US dollars. Click the book's description to see more details; click the Add Item link to buy a book.

3 If you really want to save money, restrict your searches to Australian booksellers, so you don't have to pay through the nose for shipping. Scroll down to the bottom of the results page to find the PowerSearch panel,

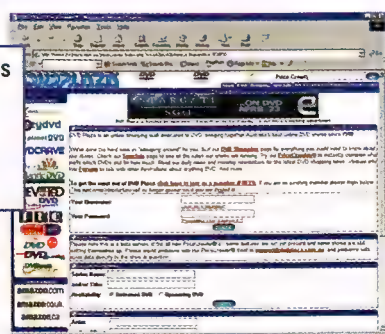


select Australia from the drop-down Country list, and click PowerSearch Now.

4 Finally, to ensure you get the very best deal, click the Sort By Ascending Price arrow.



Let DVD Plaza's Price Crawler track down DVD bargains for you.



and TV services, plus a wide range of specialty areas, ranging from health to science to sport. You can view streaming news video, listen to 24-hour news radio or catch up on a transcript or audio replay of many of the excellent programs produced by the ABC. This is a great site simply to browse through.

— Paul Zucker

OFFICE SUITE FREEBIES

Microsoft Office costs an arm and a leg. If you need an office suite but want to keep your limbs intact, you have not one but two excellent alternatives. OpenOffice.org (www.openoffice.org) is an open source suite containing a word processor, presentation package, drawing program, spreadsheet and data access tools. 602Pro PC Suite (www.software602.com/products/pcs/) is a freeware suite with a word processor, spreadsheet, graphics editor and photo organiser. Both suites allow you to read and write documents in Office formats, so you can remain in communication with the rest of the Office-dominated world.

— Rose Vines

ONLINE SERVICES

goBCL www.gobcl.com

Need to convert a document into Adobe Acrobat (PDF) or HTML format? Have the job done for free by goBCL. Submit documents in PDF, RTF (Rich Text Format), TXT, Word, Excel or PowerPoint format, either via your Web browser or via email. The results

will be emailed back in a few minutes. goBCL can handle multicolumn layout and complex image placement, and you can submit as many documents as you like, provided each is smaller than 500 kilobytes.

— Rose Vines

MyRealBox www.mymrealbox.com

There are plenty of Web-based email services, but most of them are total spam magnets. Some of them even have the gall to offer 'enhanced' versions with spam protection — for a price. That's no bargain. If you'd like the convenience of a Web email account, available from anywhere around the world, and you prefer not to deal with a deluge of spam, get an account at MyRealBox. This wonderful free Novell service gives you 10 megabytes of storage space in a spam and virus-protected environment.

— Rose Vines

ShieldsUP! www.grc.com

Security expert Steve Gibson provides a number of useful services on his Web site. Especially worth trying is ShieldsUP!, a set of tools designed to check the efficacy of your firewall. Click the Test My Shields and Probe My Ports links to discover whether your computer is vulnerable to outside attack. The loquacious Mr Gibson will give you the results and a good deal of advice on securing your PC.

— Rose Vines >>>

TOP TIP Killing pop-ups

Sites peddling freebies are notorious for spewing forth multiple pop-up windows in your browser. Before you embark on your own bargain hunt, make sure you have some protection from pop-ups installed. Visit www.tucows.com/windows.html and search for popup to find a freeware pop-up stopper. Or use Crazy Browser (www.crazybrowser.com), which has an inbuilt pop-up handling for all your bargain surfing.



TOP TIP

Site bona fides

Before you buy from any site you've not visited before, check out the site owner's credentials. Be wary of any online retailer that doesn't list a bricks-and-mortar address and phone number. If you have a credit card with online fraud protection, use it for your purchases to minimise the risk, should a seller turn out to be a dud.



Web Site Warehouse

<http://websitewarehouse.race.net.au>

Building a Web site for your small business can be a daunting prospect. If the technicalities don't overwhelm you, the cost probably will. Race Online offers a solution to both these problems: prefab Web site designs at discount prices. Just visit the site, browse through the designs, and when you find one you like, buy it. For \$600 you'll get a stylish startup site, incorporating your own (supplied) content, customised logo and menus, with the whole shebang uploaded to a Web server of your choice. The design you choose is removed from the Warehouse catalogue, so you won't find it mimicked elsewhere.

— Rose Vines

SECOND-HAND GOODS

Trading Post

www.tradingpost.com.au

If you enjoy looking for bargains in the hard copy of *The Trading Post*, you'll love the online version. The site is packed with features which make it easy to find all sorts of products. All items for sale are divided into major categories such as Home & Family, and Automotive. Once you've chosen your state, narrow down your search by selecting a subcategory and browsing through products in a set price range, a set region, or containing specific keywords.

— Anna Raciti

SHOPPING TOOLS

Froogle

<http://froogle.google.com>

Using Google's search technology, Froogle does killer product searches, locating sites and stores that offer the item you want. Most Froogle listings are for overseas sites, but a surprisingly large number of searches cover local sites as well. Just append **site:au** after the product in the search box. For instance, if you are after a digital camera, search for "digital camera" **site:au** and you'll get over 4,000 Australian listings, with images where available.

— John Hilvert

Hotdockets

www.hotdockets.com.au

Hotdockets provides free discount vouchers for anywhere within Australia. Simply select your state, area and (optionally) local area to narrow down the search. You are then presented with the coupons available for your area. Tick off the ones you want and a new window will open where you can print your selected vouchers. Weekly specials and accommodation deals are provided on the home page — at the time of writing, a movie voucher for Village cinemas Australia-wide was available for \$8.20.

— Olga Jevdic

Google's Froogle bargain search turns up the goods.



TRAVEL & ACCOMMODATION

LastMinute.com

www.lastminute.com.au

Planning some leisure time? Whether you are going on holiday or just looking for something to do on a Friday night, Lastminute.com will help you plan it on a budget. The site specialises in cheap flights and accommodation, here and overseas. If a night out is more your scene, check out Lastminute's listing of things to do and places to wine and dine — you'll find discounts on restaurants, shows and concerts.

— Anna Raciti

Need It Now

www.needitnow.com.au

Need It Now offers discounted last-minute hotel accommodation for Australia and New Zealand. There are daily hot specials for both countries, featuring a variety of hotels in a number of price categories. Browse hotels by selecting your country, state (or island) and area required. Search results are displayed in descending order according to star rating. The site provides a weekly newsletter to which you can subscribe and gift certificates are also available.

— Olga Jevdic

Virgin Airlines

www.virgin.com.au

For tightwads who need to fly around Australia, the bold red, white and blue Virgin Web site is about as attractive as they come. It gives you the lowest fares, where and when, much faster than phoning up an agent. There is also a phone number for enquiries if you need to check out something with a real person. No concessions for Qantas Frequent Flyers, though.

— John Hilvert

Webjet Travel

www.webjet.com.au

This discount travel site offers cheap airfare and travel packages, as well as worldwide accommodation. The home page lists Last Minute Deals for travel within Australia and Web eDeals for international travel. If you're a Qantas Frequent Flyer member, you'll receive points when you book your flight, and travel guide information is provided. There is also a helpful passport and visa information section, listing the Australian consulates for a number of countries. If you require help, consultants are available online via an instant messaging system.

— Olga Jevdic



Web Site Warehouse can get your business online in style for less.

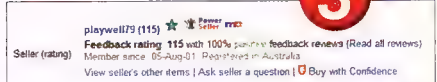
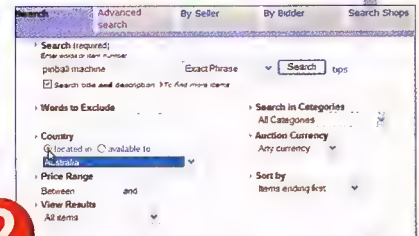
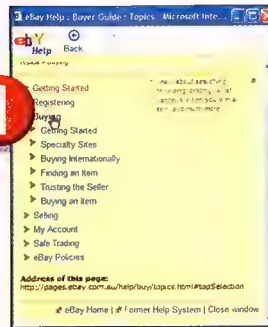
TOP TIP

Protect yourself

Some free sites tend to be unscrupulous in trying to get you to return to them. Many of these sites make money through ad impressions, so return visitors equate to dollars. If you find your browser hijacked by such a site, read Hijacked! (www.geekgirls.com/net_hijacked.htm) or SpywareInfo (www.spywareinfo.com/articles/hijacked) for a solution.

STEP BY STEP: BID AND SAVE AT EBAY

- 1 There's no doubt you can find bargains at eBay, provided you keep your head and don't get overwhelmed by the site's chaotic design. Before you do anything else, make sure you've read the Getting Started information, available by clicking the Help link on the home page.
- 2 Once you have your bearings, click the Search link on the home page to open the Search page. Type an identifying word or phrase in the Search box, select the type of search ('All of these words', 'Any of these words', or 'Exact phrase'), tick the 'Search title and description' box to maximise your results, pick Australia from the drop-down Country list, and select either 'Located in' or 'Available to'. Select additional options if you want, then click the Search button.
- 3 When you find the item you want, read the seller's terms and do a little background check on the seller themselves before you bid. eBay provides a Star Rating system and feedback information on each seller. Before you fork out big bucks for any item, make sure the seller has a decent reputation.



USED MUSIC & MOVIES

Alibris

www.alibris.com

Alibris, famed for its catalogue of over 30 million new and used books from international booksellers, has recently added music and movies to its collection. That makes it a wonderful one-stop shop for out-of-print and second-hand titles. In the music search, you can specify CD or vinyl, while the movie section provides DVD and video searches. If Alibris can't find a title for you, leave a Book Fetch request and the service will contact you as soon as a matching title surfaces anywhere around the world.

— Rose Vines

Collectors Choice music

www.ccmusic.com

Collectors Choice has established itself as the online supplier for hard-to-get music at bargain prices. The company licenses out-of-print material and re-releases it on its CC label, often incorporating two albums on the one CD. It specialises in material on vinyl records from the '40s to the '80s. Collectors Choice offers freshly minted CDs of groups like The Kingston Trio, The Byrds, Beau Brummels, Limelitters, New Christy Minstrels and many others.

— John Hilvert

GEMM

www.gemm.com

GEMM is the musical equivalent of Advanced Book Exchange. It has 16 million LPs, 45s, CDs and cassettes in its database, including out-of-print, rare, discount, imports and independent artists. Search by artist, title, category, label or catalogue number. All matching results are displayed with prices and a star rating system for seller reliability. You can narrow your searches by country. Recently added are two related sites, GEMMvideos.com (videos and DVDs) and GEMMbooks.com.

— Rose Vines

VIDEO SOFTWARE

VirtualDub

www.virtualdub.org

VirtualDub is one of the best video converters/translators in the business. It converts any AVI video file from one codec to another, and can change audio from any one format to another, including MP3. It only works with Video for Windows (VfW) codecs, but supports DivX and XviD. It also has the best deinterlace tool we've seen. Resize a video, join clips together — VirtualDub is a must-have tool. It is free for noncommercial use and even comes with a Pentium 4-optimised version.

— Darren Yates

XviD video codec

www.xvid.org

DivX has become well known in video circles as one of the best and fastest video codecs available. But as with most things good, DivX went commercial. It's still free for noncommercial use, but has the smell of Microsoft about it now. XviD started from the same gene pool but continues to be open source. It compresses video files to a fraction of the original size, with little loss in quality. Version 1.0 should be available by the time you read this.

— Darren Yates

WEB DESIGN FREEBIES

There are plenty of Web editing tools around, but very few of them focus on content creation. Instead, they focus on Web design and coding. That's not the case with Fog Creek's CityDesk (www.fogcreek.com/CityDesk). This full-featured content management application will help you keep the content of your Web site fresh and up to date. The free Starter Edition handles sites of 50 pages or less. If what you want is, in fact, a site editor, check out the text-oriented Webmaster 3.0 (www.html-helper.com) or the visually friendly 1st Page 2000 (www.evrsoft.com/1stpage).

— Rose Vines **PCU**

TOP TIP

When a dollar is not a dollar

Make sure you know the currency used on a site. Even some Australian sites display prices in US dollars in order to cater for overseas customers, and to avoid the vagaries of exchange rates. Before you pounce on a great deal priced at \$49, make sure that's Australian dollars and not \$US49. The latter would set you back some 50% more.

Clever spreadsheet formatting

Helen Bradley looks at some cool ways to use conditional formatting to format worksheets and create charts.

This example uses the AND and OR operators to format a worksheet to record employee holidays.

At its simplest, Excel's conditional formatting tool lets you create conditions for formatting cells in a worksheet. For example, you can make a cell red if it contains a negative number and black if it is positive. However, that's only the beginning. You can also use it to create complex formats which depend on the results of a formula, even one which calculates using a different cell.

This makes conditional formatting a very powerful tool and capable of achieving all sorts of results, from formatting each alternate row in a workbook, to creating a live 'worksheet' chart which varies as the data on which it is based changes. This month, we look at some of the things you can do with Excel's conditional formatting feature and a way to mimic the results when creating a chart.

Format alternate rows

When you are working with a very large worksheet where the data appears in rows across the sheet, you may find it difficult to keep track of where you are as your eye moves across a row. You can solve this problem by formatting each alternate row in the worksheet a different colour. Select the entire worksheet, or just the area containing the data and click Format → Conditional Formatting. From the first dialog, select Formula Is and in the text area to its right, type `=mod(row(),2)=1`. Click the Format button and set the format to use for each alternate row in your worksheet (a light pastel colour is a good choice). Click OK twice and each alternate row in your worksheet will be formatted accordingly. You

can apply the same concept to formatting alternate columns if this is the way you view the worksheet. In this case, use `=mod(column(),2)=1`.

This formula uses the MOD function, which calculates the remainder when the current row number is divided by 2 and then tests to see if it is equal to 1. If it is, then the row is formatted; if not, it isn't.

Creating time charts

Using conditional formatting, it is also possible to create a time chart, for example, which shows dynamically the holidays planned during a certain time period for the employees of a department. In this situation, you would enter each employee's name down the left of the worksheet, beginning in cell B4, and then allocate column C to the start date of their planned holiday and column D for the end date. The days of the month go across the top of the worksheet, from cells D3 to the right — if you enter the first two days, you can drag to create the remainder.

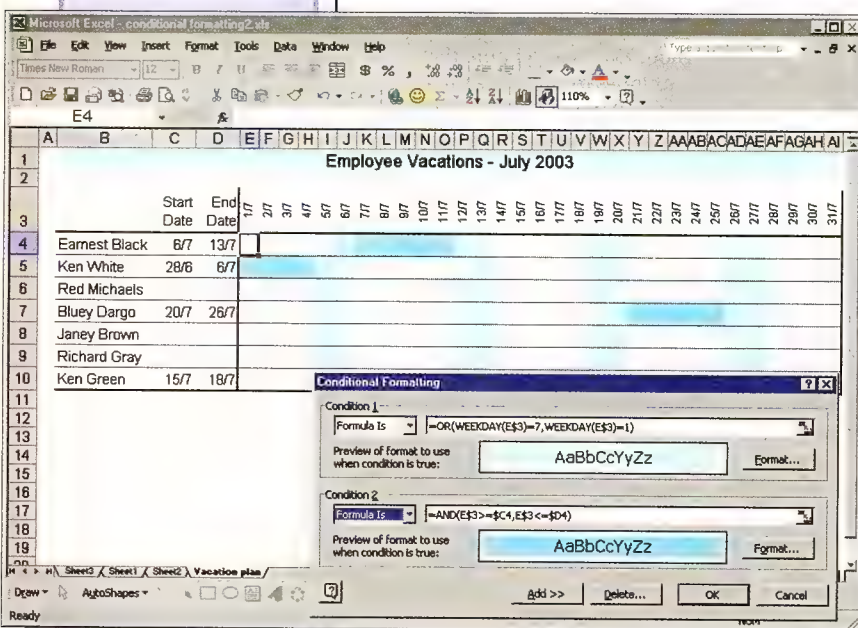
Format the dates using a custom format so they are displayed as 1/7, 2/7 and so on, to make them easy to read. To do this, highlight the cells and click Format → Cells → Number tab and select the Custom category. In the type area, enter `d/m` as the format and click OK. If you format your numbers before you drag to fill the series, you'll find that Excel not only creates the remainder of the series, but it also continues the formatting across all the cells in the series.

We'll use conditional formatting to highlight the dates that each employee will be taking as holidays during that month. But as we're also interested in knowing which dates are weekend dates, we'll also highlight them in a different colour.

To do this, click in cell E4 and enter this as the first condition in the Conditional Formatting dialog: **Formula is** `=OR(weekday(E$3)=7,weekday(E$3)=1)`. Then click Format and choose a colour from the patterns tab to format the weekend days.

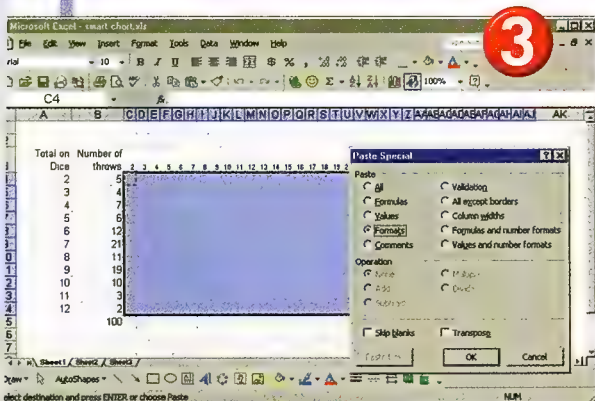
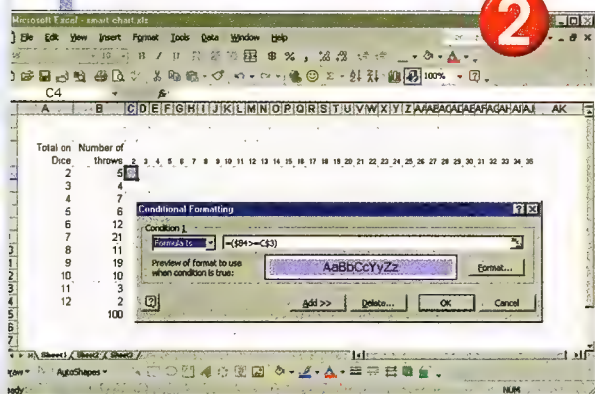
The second condition will check to see if this date is one of that employee's holiday dates for this period. Click Add and enter this condition: **Formula is** `=AND(E$3>=$C4,E$3<=$D4)`. Click Format to set a colour for this and click OK. Copy the contents of cell E4 to the remainder of the cells in the worksheet and watch as the cells change to display weekends in one colour and holiday times in another.

These formulas use the AND and OR operators which allow us to build complex conditions that make two calculations instead of just one. In the weekend days example, we're checking the date in the cell in row 3, immediately above the current cell to see what day number it is. The Weekday function returns a number in the range 1 to 7 depending on the day of the week — 1 is Sunday, 2 is Monday and so on, to 7 which is Saturday. In our formula



STEP BY STEP: CHARTS THAT COUNT

Charts don't have to be created using the Excel chart tools and here we show you how you can plot data in worksheet cells using nothing more than conditional formatting and some strategically placed values to use for comparison.



$=OR(weekday(E\$3)=7, weekday(E\$3)=1)$ we check if the day in cell E3 is a Saturday or a Sunday, which it will be if the Weekday function returns a 1 or a 7.

The formula has been written with a combination of absolute and relative cell referencing in such a way that it can be copied down and across the worksheet without requiring alteration. The column letter is formatted as a relative address so it will vary as the formula is copied from left to right. But the row number is fixed so that no matter where the formula is copied, it will always reference the value in row 3.

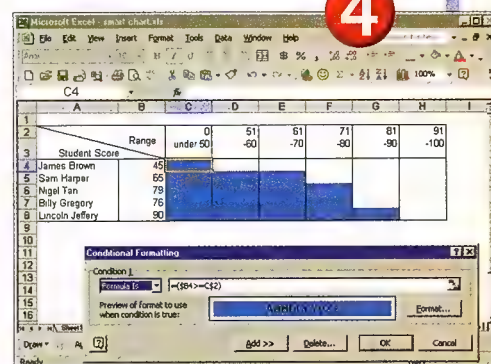
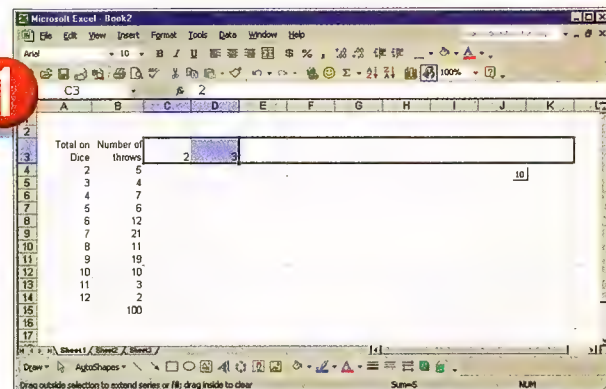
Similarly, the formula which highlights a cell if the employee will be on holidays in that period is also formatted with a mix of relative and absolute references, so it can be copied. This second formula uses AND to determine if the day in question falls on or between the start and end dates of that employee's holiday period. The formula in cell E4 $=AND(E\$3>=\$C4, E\$3<=\$D4)$ checks to see if the value in cell E3 directly above it (which is the first day of the month), is equal to or greater than the date in column C of the current row (the start date). It also checks to see if the value in cell E3 is equal to or less than the date in column D of the current row (the end date). Only if both tests are true (ie. the

1 This example will plot the results of throwing two dice 100 times. The total of the dice was counted and entered into a frequency table, which appears here in columns A and B of the worksheet. To plot the values, you'll need to enter the numbers 2 to 35, starting in cell C3 (this allows you to use some larger values in column B). To do this, type the numbers 2 and 3 then select them and drag the fill handle to the right.

2 Select columns C through to AJ and shrink their width down very small — you can also shrink the font to a small size so the numbers can be seen more clearly. Click in cell C4 and click Format → Conditional Formatting. From the first drop-down list, select Formula Is, then type $=\$B4>=\$C3$ in the box. Click the Format button and choose a colour to use for the cell's fill colour from the Patterns tab. Click OK.

3 Click in cell C4 and click Edit → Copy. Highlight all the cells from C4 to AJ14 and click Edit → Paste. This copies the conditional format from cell C4 and pastes it into all the other cells in the plot area. The chart now shows the results graphically next to the values themselves. If you change a value in column B, the length of the bar automatically alters.

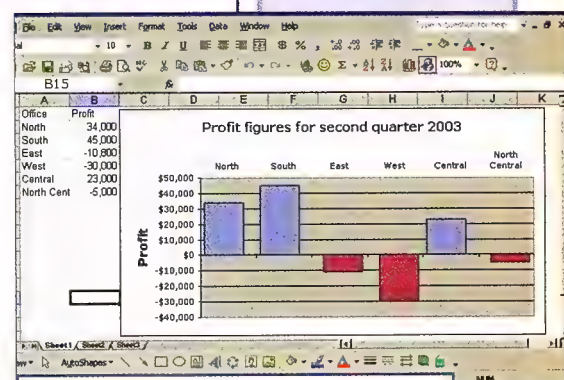
4 You can vary this conditional format to manage the situation where you are using much larger numbers. This chart shows a set of student scores grouped by the range of the score they received. The values in row 2 are used for the conditional format which, for cell C4, reads $=\$B4>=\$C2$ and which was then copied to all the other cells in the range C4:H8.



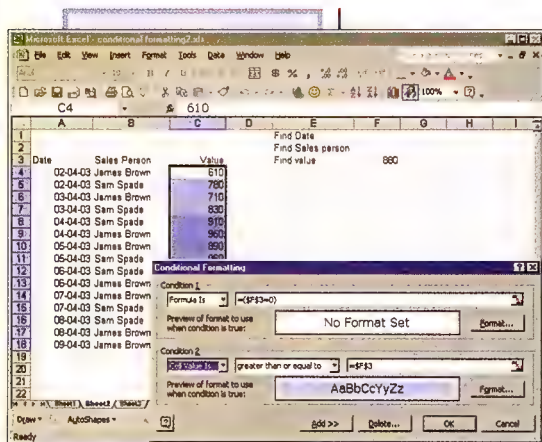
date is equal to or greater than the start date, and equal to or less than the end date), will the colour be applied.

Using IF to create a chart

Although you can't use conditional formatting in an Excel chart, you can create a similar effect using an IF function. Consider this scenario: you have profit figures for a number of different offices and some have incurred overall losses. You want to plot these on a chart in such a way that the negative values appear in a >>>



Using IF formulas, you can split your data into positive and negative values to plot them in different colours on your chart.



Conditions are evaluated in order, so that if one condition applies, those below it won't even be evaluated.

Click the Chart wizard and create a column chart (selecting the first subtype), then click Finish.

To polish the chart, click the Legend and press Delete to remove it. Click on one of the data series, right-click and select Format Data Series → Options tab. Set the Gap width to 20 and the Overlap to 80, then click OK. Click the Category (X) axis to select it, right-click and select Format Axis → Patterns tab. Set the Tick mark labels value to High. Click the Font tab and adjust the font size to a small size, then click OK. Negative values are now a different colour to the positive ones, and if the values alter, the chart redraws correctly each time.

Match today, any day or anything

Consider this scenario: you have a list of invoices which you have sent and you want to highlight all the invoices which were sent today (or any other day). Or you might want to highlight those which were completed by a certain salesperson or which have a preset value. Conditional formatting can do the work for you.

If your dates are in column A, the salesperson's

different colour to the positive values on the chart. If your office names are in column A and the profit figures in column B, type these formulas in cell C2 and D2 respectively:

=IF(B2>0,B2,0)

=IF(B2<0,B2,0)

Now copy these formulas down columns C and D. This extracts the positive values into column C and the negative values into column D. Select the cells in column A which contain the office names and hold Ctrl as you highlight the corresponding values in columns C and D.

name in column B and the value of the sale in column C, you can format each column individually depending on the data you're interested in. For example, to highlight data by date, type the date to match in cell F1. Now highlight all the cells in column A and click Format → Conditional Formatting. Make the first condition read **Cell value is - Equal to - F1** and set a format, then click OK twice. Now, any cell matching the date in cell F1 will be highlighted. If there is no date in cell F1, no cell will be highlighted. You can test for a match for today's date if you type **=today()** in cell F1.

To match a person's name, type a name in cell F2 and highlight all the cells containing the salespersons' names. Click Format → Conditional Formatting and do the same thing, this time setting a format to use if the cell contains the same data as that in cell F2.

You will encounter problems in trying to achieve the same result with value of sales in F3. In this case, you will probably want to highlight all values greater than the value you enter in F3 (not just the same). However, if cell F3 is blank, you won't want anything highlighted. To do this, select the values in column C and click Format → Conditional Formatting. Set the first condition to **Formula Is =(\$F\$3=0)** and set this to No Format Set. Now add a second condition which reads **Cell Value Is - Greater than or equal to - \$F\$3** and set a Format for this condition. Click OK twice. Now, there will be no highlighting if cell F3 is empty, and when there is a value in cell F3, the corresponding values in column C will be highlighted if they are equal to or greater than the value in cell F3.

This example shows clearly the cascading nature of the conditions. If cell F3 is empty, the first condition applies and no format is set. Even though the second condition will be met by all cells in column C, this condition won't be tested for because condition 1 has already been satisfactorily met. Only if there is a value in cell F3 (so the first condition is not met), will condition 2 be evaluated.

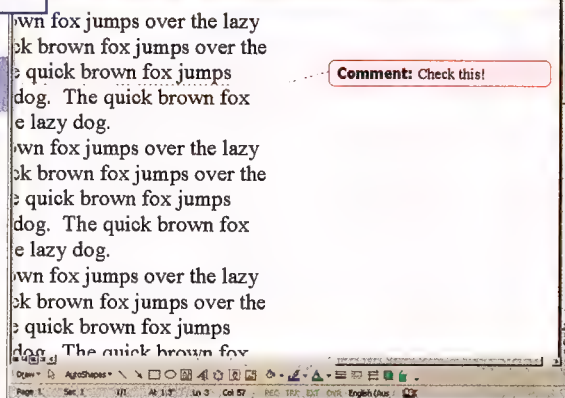
As you can see, conditional formatting is a more powerful tool than may first be apparent when you start using it. There are many ways you can use it to enhance worksheets and to make them more informative. **PCU**

This month's Word macro adds a preset comment to your text — add it to a toolbar button so it's available with a single click.

MACROS OF THE MONTH

The Word macro of the month adds a simple comment to your text to remind you to check the commented text. Right now, the comment reads 'Check this!', but you can customise the macro so it displays the text of your choice. If you copy this macro to your Normal.dot file and then assign it to a toolbar button, you can quickly add a comment reminder whenever you are working on a document. To remove the comment, right-click it and select 'Delete comment'. The file reminder.doc contains instructions for adapting the macro and adding it to Normal.dot.

This month's Excel macro is a function which converts a number



ON THE CD

to a dollar amount in text. For example, it will turn the number 23.59 into 'twenty three dollars and fifty nine cents'. The macro is extracted from Microsoft Knowledge Base article 95640 and was designed to be used in Access. Because it is written in Visual Basic for Applications, it will also work in Excel

without alteration. If you're using Access, you can locate the code on the Microsoft Web site or copy and paste it from the Excel file. The Excel file contains instructions for using the function in the workbook numbers.xls.

Clipboard secrets

If you have used Windows for any length of time, no doubt you have a somewhat cavalier attitude towards that little piece of wizardry known as the clipboard.

Although most of us take it for granted, upon close inspection you'll find there's more to the clipboard than first meets the eye.

Clipboard basics

If you're a newcomer to Windows, a brief description of the clipboard is in order. You can think of the clipboard as the digital equivalent of a scratchpad, used to store data temporarily. Whenever you cut or copy a piece of text, that text is stored on the clipboard.

The same thing happens to other types of data you copy, whether you're copying just a few cells from a spreadsheet, a graphic or something else. You can then paste the contents of the clipboard into another part of the same document or into a completely different document. That means you can use the clipboard to transfer information between programs.

The clipboard doesn't function like most programs; instead, it works transparently, providing its single-minded services at all times. You don't have to 'run' the clipboard to use it, as it simply operates as a core Windows function. So, you can cut, copy and paste via the clipboard in your word processor, Web browser, Windows Explorer and in any other program. You can even do so within dialog boxes.

The clipboard has one very important characteristic: it can hold only one item at a time. This has two consequences:

- Whenever you cut or copy an item to the clipboard, it replaces what's currently there.
- Because an item remains on the clipboard until it is replaced (or until you shut Windows down) you can paste the same item repeatedly into different destinations.

Using the clipboard entails these four simple steps:

1. Select the item you wish to copy or move. In most text-based applications, this involves dragging across the text you wish to select with the mouse. Graphics programs each have their own techniques for selecting. You'll also often find selection options on a program's Edit menu.
2. Copy or cut the item. The former places the item on the clipboard without affecting the original; the latter places the item on the clipboard and removes it from the original.

Once again, the Edit menu provides Cut and Copy commands, or you can use the shortcut keys Ctrl-C (or Ctrl-Insert) to copy an item, and Ctrl-X to cut an item.

3. Move to the location where you wish to paste the contents of the clipboard and click to place the insertion point. It may be another point in the same document, or it may be in a new or different document.
4. Use Ctrl-V or the Edit → Paste command to copy the contents of the clipboard into the destination.

Clipboard voyeurism

If you'd like to get a better picture of how the clipboard functions, load up the Clipboard Viewer. This little program allows you to see the current contents of the clipboard. You'll find it by clicking Start → Programs → Accessories → System Tools → Clipboard Viewer.

If you can't find the Clipboard Viewer, install it this way:

1. Click Start → Settings → Control Panel.
2. Double-click Add/Remove Programs.
3. Click the Windows Setup tab.
4. Click System Tools in the list and then click the Details button.
5. Place a tick beside Clipboard Viewer and click OK twice. Insert your Windows installation CD into the drive, if prompted.

With the Clipboard Viewer running, open a document, select a piece of text and press Ctrl-C to copy it to the clipboard. In Clipboard Viewer, you'll see the text. Now open an image file in a graphics program and copy the image to the clipboard (or you can right-click an image in your browser and select Copy from the pop-up menu). Switch back to the Clipboard Viewer and you'll find the text has been replaced by the image.

Now, try the same thing with a file or folder: right-click the file or folder and select Copy from the pop-up menu. Switch to Clipboard Viewer and you'll find the file or folder's pathname has replaced the previous contents of the clipboard.

Clipboard smarts

It seems pretty simple, doesn't it? And, in practice, it is. But behind the straightforward process, there's quite a lot happening. For example, try the following.

1. Copy a small image to the clipboard from a Web page or from within a graphics program such as Microsoft Paint.
2. Open Notepad (Start → Programs → Accessories → Notepad).
3. Press Ctrl-V to paste the image into the Notepad document.

What happens? Nothing. And if you open Notepad's Edit menu, you'll see the Paste command is greyed out, indicating it's unavailable. >>>

Rose Vines
explains the
secrets behind
the often
forgotten
Windows
clipboard.

Clipboard Buddy
puts a lot more
grunt into the
humble Windows
clipboard.





So what happened to the contents of the clipboard? Nothing. Open WordPad or your favourite word processing program, hit Ctrl-V and bingo! Your image is inserted into the document, showing that it was still lurking on the clipboard.

The clipboard may seem simple-minded, but it has a few tricks up its sleeve. One of these tricks is that it can recognise different types of data and understands which programs can handle the different data types.

Notepad is nothing more than a text editor, so you can't paste image data into it. WordPad, on the other hand, is a rich text editor, which means it can handle text, formatted text and graphics. The clipboard understands this.

In fact, when you copy data to the clipboard, it is usually stored on the clipboard in multiple formats. For instance, if you copy a paragraph of text from Microsoft Word, that text will be saved in not one but four different formats on the clipboard: plain text, minus all formatting; rich text format (RTF), which includes formatting such as underlining, fonts and colours; HTML format; and finally, as an image of the text.

Check it out:

1. Open WordPad (Start → Programs → Accessories → WordPad), type a few lines and add some formatting to the text.
2. Select the text and press Ctrl-C to copy it to the clipboard.
3. Open a graphics program (to use Microsoft Paint, click Start → Programs → Accessories → Paint) and press Ctrl-V to paste the text into a new image document.

If you have Microsoft Word and Excel, try the same thing: create a table in Microsoft Word and fill it with data. Select the table and press Ctrl-C, then switch to Excel and select Paste Special from the Edit menu. You'll find you have a smorgasbord of choices for copying the data.

Something similar happens when you copy a file or folder to the clipboard. As we discovered earlier when discussing the Clipboard Viewer, when you copy a file to the clipboard, the Clipboard Viewer displays the file's pathname.

The clipboard itself is smart enough to realise you're not copying merely the file's name but the file itself. (You can, of course, use the clipboard to copy a filename as well: select a file, press F2, press Ctrl-C, open a document or a dialog box, click to set your insertion point and press Ctrl-V.)

The RAM drain

The clipboard works all its magic in memory. If the item you copy is small enough, it is stored in RAM (random access memory).

If it's very large, it may be stored in virtual memory, which is merely a section of disk space temporarily allocated as 'extended RAM'. No matter whether it's in RAM or virtual memory, the contents of the clipboard go up in smoke as soon as you exit Windows.

However, if you don't exit Windows, the contents remain, and if they're large enough, they can cause a drain on your system.

If you happen to be working on a very high-resolution image in your graphics program and you copy the whole image to the clipboard, Windows will allocate sufficient RAM/virtual memory to store the image. If you leave that image on the clipboard, you'll notice a slowdown in your applications.

There's a simple way to solve this problem. As soon as you no longer need the contents of the clipboard, replace it with something small: select and copy a word in your word processor or select a tiny portion of the image you're working on, then copy it to the clipboard.

Office's 'super' clipboard

The clipboard is useful, but far from perfect. Clearly, it would be handy to be able to copy and store more than a single piece of information at a time.

This single-item limit is something which Microsoft itself has tried to address in its Office programs. From version 2000 on, Office acquired its own high-powered version of the clipboard, able to handle a dozen items concurrently.

While this multi-item clipboard works quite nicely in Office XP, the Office 2000 implementation is very poorly thought out. It's so bad, in fact, that you're more likely to want to revert to the standard clipboard than use the Office version.

If you feel this way about the Office 2000 clipboard, you can banish it by editing the Registry (make sure you have a Registry backup first!).

1. Click Start → Run, type **regedit** in the Open box and click OK.
2. Navigate to the key:
HKEY_CURRENT_USER\Software\Microsoft\Office 9.0\Common\General
3. Right-click in the right-hand pane and select New → DWORD Value from the pop-up menu.
4. Name the new value **AcbControl**.
5. Double-click the **AcbControl** value and change its value data to 1.
6. Exit the Registry Editor.

This setting disables the clipboard toolbar trigger in Office 2000. You can re-enable it by changing the value of the same key to 0.

Supercharging the clipboard

Microsoft is not the only one to realise the limitations of the clipboard. On the Internet, you'll find a couple of dozen programs designed to provide a better clipboard.

Each of these programs allows you to add multiple items to the clipboard and then use a special key combination or a quick pop-up menu to select the specific item you wish to paste.

Many of them enable you to save permanent clipboard lists, which you can load at startup, so you have boilerplate text available for insertion on demand. Some of them handle text only, others handle any type of data.

We've put a selection of these programs, both freeware and shareware, on this month's cover discs. I recommend Clipboard Buddy, a freeware program which is a snap to use, highly configurable, and loaded with features. **PCU**

ON THE CD



Try out one of the clipboard superchargers from this month's cover discs. Take your pick from the freeware Clipboard Buddy, Clipomatic and Clipboard Express, or the shareware programs Clipboard Express Pro, ClipMate, Clipboard Magic and SmartBoard XP.

STEP BY STEP: USING SCRAPS

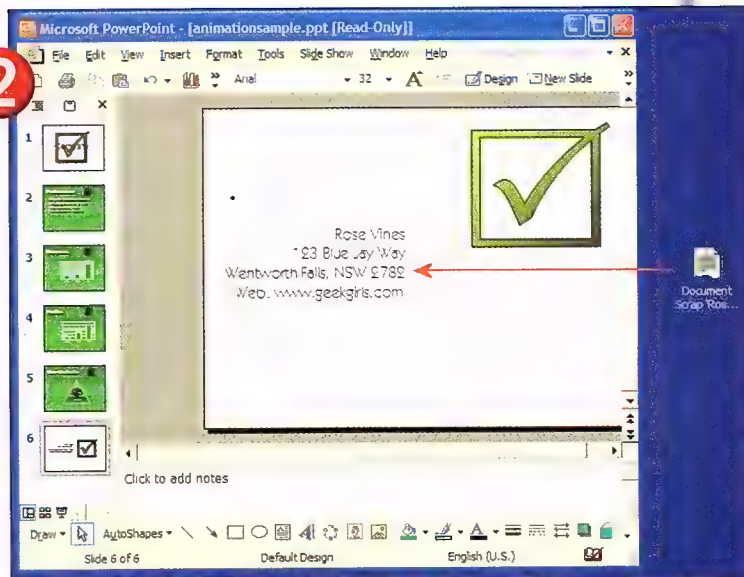
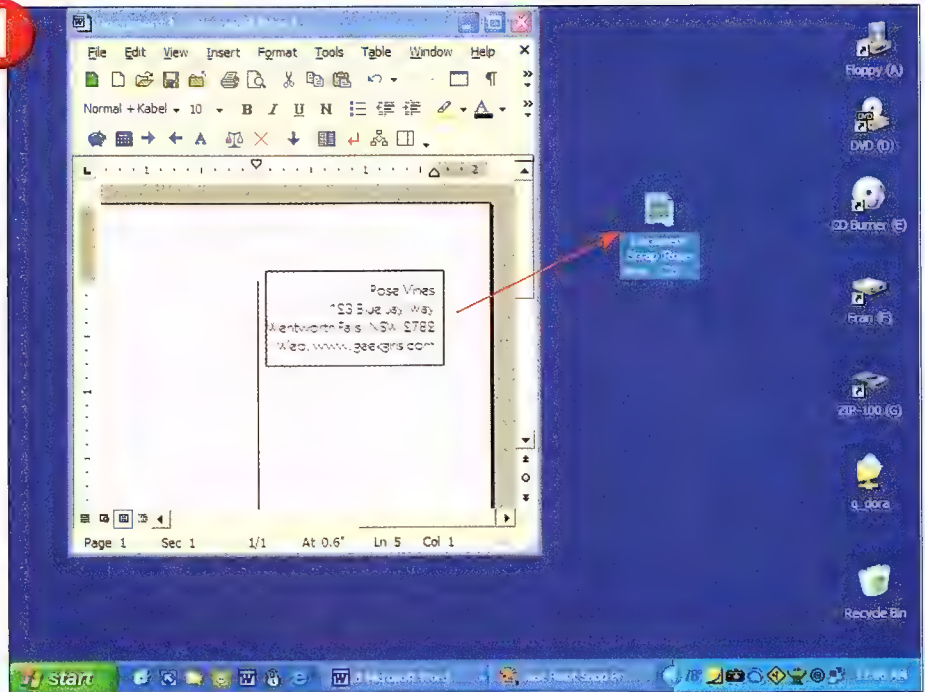
1 One of the most ignored features in Windows is document scraps, which you can think of as clipboard files saved to disk. A scrap is a portion of a document saved onto the desktop or directly into a folder. You can only create scraps from programs that support Object Linking and Embedding (OLE), such as Microsoft Office programs, WordPad (to a limited degree) and a number of other applications. Scraps are handy because you can use them over and over, until you delete the scrap file itself.

Here's how to create a scrap.

- Select a portion of a document.
- Resize the document window so you can see part of the desktop underneath.
- Click and drag the selection onto the desktop or into a folder. Or, if you wish to cut the text from the current document and create a scrap from it, hold down the Shift key while you drag it onto the desktop or folder.

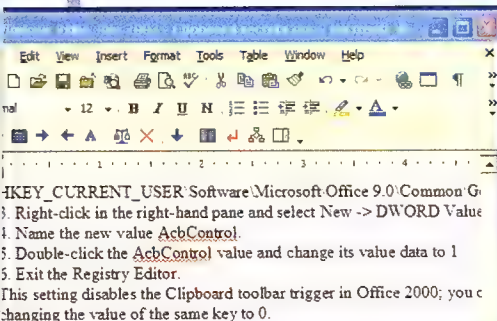
Windows will name the scrap, usually using the first few words of the selected text. You can rename the scrap in the usual manner (press F2, type the name and press Enter). Although you won't see an extension on the filename, there's a special hidden extension of SHS, indicating the scrap is associated with a special component called the Shell Scrap Object Handler.

2 To use the scrap, either double-click it to open it in its original application, or click and drag it into an existing document in the same application, or into a document in another OLE-enabled application.



3 One of the most useful features of scraps is that you can use them to create bookmarks in documents. Try this:

- Open a multipage document in Word.
- Scroll down a few screens and select a paragraph.
- Right-click and drag the paragraph onto the desktop. When you release the mouse button, select **Create Document Shortcut** from the pop-up menu.
- Close the original document, making sure you save it.
- Double-click the document scrap you created on the desktop. Your original document will open, positioned at your selection point.



Supercharging the Clipboard
Microsoft is not the only one to realise the limitations of the Clipboard. Find a couple of dozen programs designed to provide a better Clipboard. Lets you add multiple items to the Clipboard and then use a special key to pop-up menu to select the specific item you wish to paste. Many of these clipboard lists, which you can load at startup, so you have boilerplate text at hand.

The lowdown on logon

Rose Vines
shows you how
to customise
your Windows
XP logon.

TOP TIP

Three fast switches

XP lets you access fast user switching in any of three ways:

- If you have a Windows key on your keyboard, press it in conjunction with the L key (Windows key-L).
- Press Ctrl-Alt-Del and select Switch User from the Shut Down menu.
- Click Start → Log Off → Switch User.

The User Accounts applet in Control Panel allows you to choose the type of logon.

Logging on to a computer seems so mundane a task, you'd think there'd be nothing much to it. Not so. The logon process not only makes it easy for many users to share the same machine, it also provides a major line of defence in the security of your PC. Windows XP provides plenty of options — many of them tucked away — to allow you to streamline the logon process.

XP handles logons far more elegantly than earlier versions of Windows. It provides a choice of logon methods, offers Fast User Switching to allow you to quickly change users without closing down running programs, and makes password-protected access easier to use.

Welcome screen insecurities

By default, Windows uses the Welcome screen to allow a number of users access to the same computer. You set up the users either when you install Windows or via User Accounts in Control Panel, provided you're logged in as an administrator. Take a look in User Accounts and you'll see one of the options is 'Change the way users log on or off'. You can choose to keep the Welcome screen, in which case you can either enable or disable Fast User Switching, or you can disable the Welcome screen and return to the Classic Windows Logon, which looks very much like the logon available in Windows 98/Me.

In Classic mode, you can't use Fast User Switching, so why bother with it at all? The answer is security. While the Welcome screen presents a friendly face to users, it also commits a number of security faux pas. For starters, it displays all valid logon names. It also provides password hints for password-protected accounts. On a home machine, this breach in security probably won't matter. In a business or more public environment, it's an invitation to the inquisitive.

Beefing up security

Switching to Classic Logon makes your PC more secure, but losing Fast User Switching is a steep price to pay if you frequently share your computer.

But there is a way to have your cake and eat at least a portion of it, too. It's possible to set up Windows so that the Welcome screen and Fast User Switching are available to all nonadministrator accounts, while providing access to the all-powerful administrator accounts via the more secure Classic

Logon. This is possible because Windows provides a back door entrance to the Classic Logon via the Welcome screen: just press Ctrl-Alt-Del-Del at the Welcome screen to display the Classic Logon dialog.

Here's how to do it.

● **Hide all administrator accounts on the Welcome screen.** The simplest way to do this is using Tweak UI for Windows XP's Logon settings. However, Tweak UI leaves a security hole behind; although it allows you to hide any account, in the process it reveals the default Administrator account. Normally, this account is hidden on the Welcome screen, but hiding other entries unhides the Administrator account.

The only way around this is to edit the Registry directly instead of using Tweak UI. Don't, of course, attempt this unless you know what you're doing and have taken the necessary precautions.

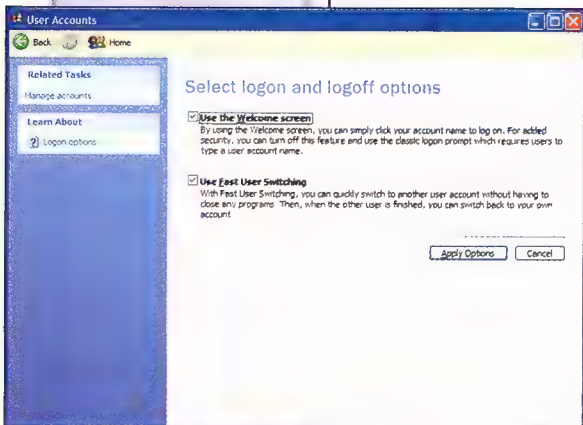
1. Click Start → Run, type **regedit** in the Open box and click OK to open the Registry Editor.
2. Navigate to:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\WindowsNT\CurrentVersion\Winlogon\SpecialAccounts\UserList\
3. Right-click in an empty space in the right-hand pane and select New → DWORD Value from the pop-up menu.
4. Name the new value with the exact username of the account you wish to hide and press Enter. Leave the key with the default value of 0.
5. Repeat steps 3 and 4 for each user you wish to hide.
6. Repeat steps 3 and 4, this time naming the new DWORD value **Administrator**. This step keeps the default Administrator account hidden.

● **Hide the most recent user in the Classic Logon box.** The Classic Logon is more secure than the Welcome screen both because it hides usernames and because it provides no password hints. Unfortunately, it slips up by displaying the username of the person who logged on most recently. Another quick Registry edit will avoid this security gaffe.

1. In the Registry Editor, navigate to:
HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Policies\System
2. If you see a value named **DontDisplayLastUserName** in the right-hand pane, double-click it and change its value to 1. If the value does not exist, right-click in an empty spot in the right-hand pane, select New → DWORD Value from the pop-up menu, name the new value → **DontDisplayLastUserName** and set its value to 1.

3. Close the Registry Editor.

● **Use the Welcome screen for limited accounts.** Once you've hidden the administrator accounts, use the Welcome screen in the usual fashion to log on to nonadministrator (limited or guest) accounts. You'll be able to use Fast User Switching to change nonadministrative users quickly.



STEP BY STEP: SPEED OVER SECURITY

1

What if your priority isn't security but speed? After all, not all of us need beefed-up security on our computers. If that's the case for you, you may wish to keep all accounts accessible via the Welcome screen so you can use Fast User Switching to change users speedily.

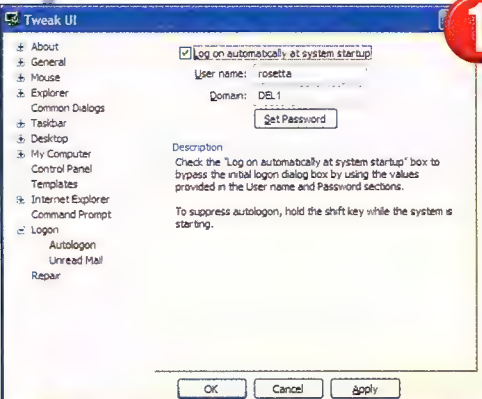
And if you really aren't fussed at all about security on your PC (say, for instance, it's used purely as a games machine), you can speed things up even further by setting up an automatic logon. You can do this even on a PC with multiple users. Please keep in mind that this makes your computer highly insecure, as it not only provides automatic logon but also stores your user password in the Registry, where it's visible to anyone.

One way to set up auto logon is to use Tweak UI.

a. Click Start → All Programs → Accessories → System Tools → PowerToys for Windows XP → Tweak UI for Windows XP.

b. Click the + beside Logon, then click Autologon.

c. Tick 'Log on automatically at system startup', type in the name of the user to log on and click the Set Password button to create a password for the user, if necessary. Then click OK.



2

You can do the same thing with a Registry edit.

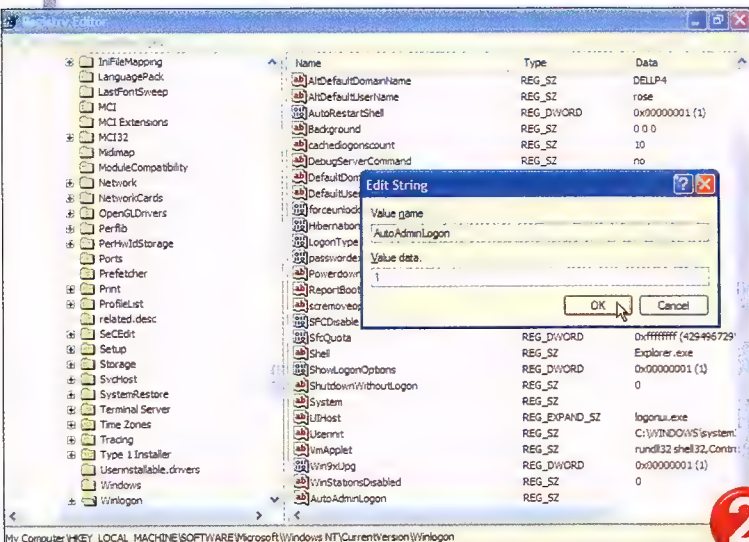
a. Click Start → Run, type `regedit` in the Open box and click OK.

b. Navigate to: `HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon`

c. Right-click in an empty space in the right-hand pane, select **New** → **String Value** from the pop-up menu, name the value `DefaultUserName` and set its value to the username you wish to log on automatically.

d. Right-click again in the right-hand pane, select **New** → **String Value**, name it `DefaultPassword` and set its value to the above user's password.

e. Right-click again, select **New** → **String Value**, name it `AutoAdminLogon` and set its value to 1. (Setting the value back to 0 will disable autologon.)



2

Automatic logon doesn't work if you have the `DontDisplayLastUserName` setting enabled.

a. Navigate to: `HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Policies\System`

If the key `DontDisplayLastUserName` exists, make sure its value is set to 0.

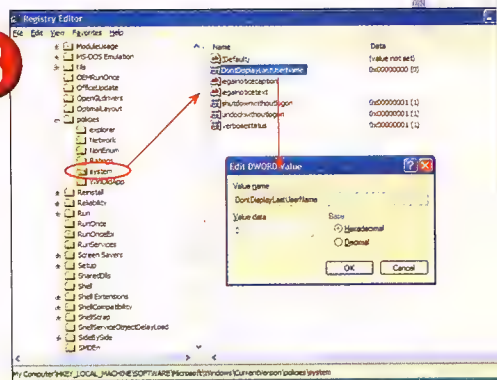
b. Close the Registry Editor and restart Windows.

Windows should now start automatically, logging you on to the selected user's

account. If you want to bypass the autologon, hold down the Shift key during bootup or logoff.

One more thing to keep in mind if performance is your key concern is that Fast User Switching can cause a drain on your PC's performance. Because it allows you to switch between users without closing programs, those open programs in other users' accounts put a drain on your system's resources. If you want the best performance, either close programs before you switch accounts, or disable Fast User Switching.

3



● Use the Classic Logon for administrator accounts. If you wish to log on using an administrator account, when the Welcome screen appears, hit Ctrl-Alt-Del-Del to display the Classic Logon (hit Esc to redisplay the Welcome screen). Type your username and password in the boxes and click OK to log on.

One word of warning: using this mixed Classic/Welcome logon procedure essentially disables Fast

User Switching for administrator accounts. You can use Fast User Switching to go from an administrator account to a nonadministrator account, and from one nonadministrator account to another, but in order to return to your administrator account (with its running programs) you'll have to completely log out of the nonadministrator account. Until you do so, hitting Ctrl-Alt-Del-Del will prove fruitless. **PCU**

Recover data from a failed hard drive

A failed hard drive without a backup can be a disaster. Darren Yates shows how you can try to recover the data.

Quite often the staff of *PC User* contribute ideas for stories that end up appearing in the magazine. But this was one borne out of dire necessity. For years, I've been writing "make sure you back up your hard disk drive regularly".

I have to admit, this month, I hadn't followed my own advice and when my wife's computer decided one morning it didn't want to boot up, I was ready to hit the panic button. She had a couple of college assignments half-completed and with no backup of either of them, my reputation as the household computer guru was in serious jeopardy.

Is it really faulty?

The problem was the computer would continually drop out before booting Windows 98SE, citing an 'I/O error'. Now, while an obvious solution in this situation might be to just reinstall Windows, that's not always a hot tip.

The hard drive in this case was a 4G Quantum Fireball that had seen a bit of work in its life. The fact that it had failed suggested either the heads and/or disk platters had suffered a fault. When storage sectors on a hard drive start failing, they never get better, but simply grow in number. I've seen this first hand with an older 3.2G Quantum drive. Yes, Windows can format itself around those faulty sectors, but it can't cope when they grow in number.

So the only solution in this situation is to buy a new drive. However, before you resort to anything so drastic, it's a good idea to try booting the PC a few more times, just to check that it's not just a one-off glitch — these sometimes do happen for no explainable reason.

Buying a new drive obviously means reinstalling Windows, the motherboard device drivers, the graphics card driver software, then your applications, and finally, your external peripheral device drivers. It's a real pain in the neck, I grant you, but there's not much point putting up with a hard drive that's faulty.

It's worth mentioning at this point what I mean by 'faulty'. Hard disk drives can develop faults either with the main spindle motor that turns the platters or the stepper motor that moves the heads back and forth across the platters. Then the heads themselves can stop working, or damage can be inflicted on the disk platters where the data is stored.

A complete mechanical failure is all but impossible to fix. In this situation, I could hear the motor spinning and the heads stepping, so I was pretty sure the basic mechanics were OK.

Install old drive as SLAVE

Once you have the new drive working with all of your device drivers and application files, now is the time to install the old faulty drive as a SLAVE. If it was the only drive in your PC before, it's most likely to be set to MASTER, so look at the info panel on the drive and change the jumper settings.

Once the drive is installed, reboot the PC with the new drive set as MASTER and the old as SLAVE. Windows 98SE should boot up with the first (or only) partition of the new drive as C: and the first (or only) partition of the old faulty drive as D. A good tip is to partition the new drive into at least two areas — one as the new C: drive for your programs, and the second as a backup drive.

Now comes the tricky bit of finding out just how much of the drive is still readable.

I must stress at this point that no-one can guarantee how much data you'll be able to retrieve — it all depends on how badly the drive has been damaged.

In Windows Explorer, click on the D: drive icon and hopefully, you should get the folder listing of that drive.

What to look for

If you get that far, things are looking better. Now, you have to work out which folders you need to copy and where to find your various important files. In this article, I show you how to find just the basics. For a more comprehensive list, make sure you read Rose Vines' excellent tutorial on 'Where to find your important files', available on this month's cover discs.

The basic folders and files I was looking for were the My Directory folder, the Favorites folder with my wife's Web page bookmarks, and her email.

The My Documents folder is easy to find and sits in the C: root directory. Copy this to a safe partition on the new drive, preferably a separate partition to the new C: drive.

As you copy, you may find Windows falters and stops at some point — this will happen if the sector where a particular file you're copying is stored has failed. Unfortunately, the way Windows works is that as soon as it finds a problem, it stops. It could happen on the first file of 300 or the last, but it doesn't mean that more files can't be copied.

If necessary, you may need to resort to copying one file at a time in order to retrieve as many files as you can. Again, it's a pain, but better than not retrieving the files at all.

ON THE CD

Don't miss Darren's exclusive 15-minute video tutorial on retrieving data from a failed drive. Also, read Rose Vines' excellent tutorial on where to find your important files.

STEP BY STEP: THE BASIC STEPS

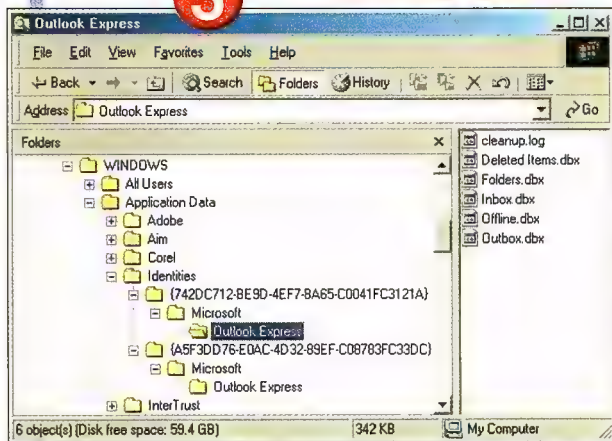
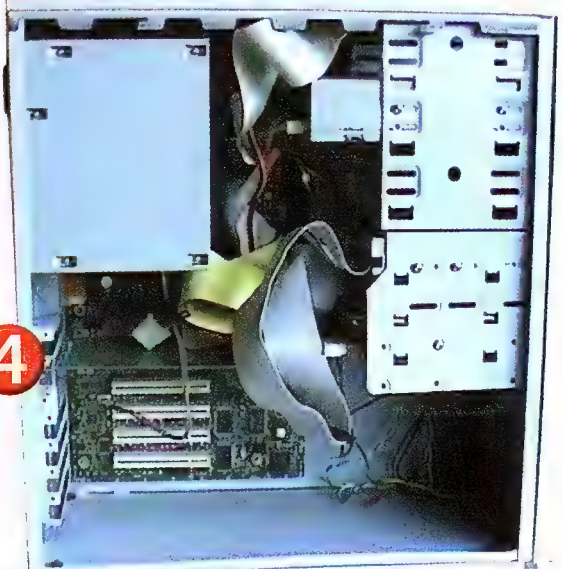
1 First, buy, partition and format a new drive. Install your operating system, driver software and applications.

2 Next, install the faulty drive as SLAVE to the new drive, or as MASTER or SLAVE on the secondary IDE channel.



3 Do your best to copy as much of the files as you can from the old drive to the safe partition on the new drive. Then overwrite or import (as appropriate) the copied files and folders into your new drive and applications.

4 Lastly, remove the old drive and return the system to its full operational condition.



The Favorites folder resides under the Windows directory in Windows 95 and 98 so, again, copy that across. If you're using Outlook Express, Windows unfortunately buries the email files under a mound of subfolders.

You can check either my video tutorial or Rose Vines' tutorial (both on the CD) for details on locating this folder.

Restoring your old files

If you've managed to copy all of the directories, files and folders you need, congratulations — you've made a lucky escape. The next trick is to copy these across to the new drive in such a way that the new applications can use them.

Provided you've added nothing to the My Documents and Favorites folders on the new drive, you should be able to simply overwrite those folders

on the new C: drive with those you just copied from the old drive and stored on the safe storage partition. Remember that the folders must go back in the same location — My Documents in the C: root directory and Favorites in the Windows directory.

Your email and address book should really be imported via the relevant application — in our case, Outlook Express 6. The reason for this is that OE6 creates a new identity for each user each time it is installed, and this new installation will have a different identity to the one you copied. Using OE6 to import the email allows you to retrieve it easily without having to chase around for the right folder.

Once that's done, you can remove the old drive, restore any cables you've moved to their rightful positions and breathe a huge sigh of relief. You should now be back where you started.

I'm off to write 1,000 times: "I will back up my wife's hard drive". **PCU**

Controlling access to files

Les Bell
explains how to
set permissions
in Linux
systems.

ON THE CD

On this month's cover discs, we've included Ogle, one of the most popular Linux DVD players.

Because Linux is a multiuser system — whether operated standalone or as a network server — it becomes important to keep users' files separate and to enforce access controls to minimise either accidental or malicious damage to files. While this is obviously most important in the corporate/academic world for which Unix was designed, it is even useful in a home setting, as any parent of several squabbling children can attest!

Each user on a Linux system has a username and password, which they use to log in. However, once logged in, the system actually tracks that user by a numeric user id as this is faster, as well as a group id. The user id number is usually 500 or greater (lower numbers are reserved for system use) and uniquely identifies the user. The group id may identify a group with many members, or the group may contain just one member, depending on the administration philosophy of the Linux distribution you are using.

A Linux system also has a number of system accounts, which are generally used by daemon processes to allow them to safely access devices and files normally inaccessible to other users. See your id numbers, by using the **id** command:

```
[les@freya2 les]$ id
uid=500(les) gid=500(les) groups=500(les),507(c34k)
```

In the same way a user has a user and group id, a file has an id number for the user who owns it,

plus an id number for the group that owns it. Whether or not you may read, write or otherwise manipulate a file depends upon firstly, whether you are the owner of a file, a member of the group that owns a file, or just an innocent bystander. Secondly, your access depends upon the permissions that apply to you by virtue of your relationship to the file.

File system essentials: directories and inodes

In order to understand these concepts, we first need to examine how files are stored in most Linux (and Unix) file systems. The file's data is stored in blocks

— usually 1K in size — on the disk surface. The file system keeps track of the blocks that are used, by recording the block numbers in data structures called 'inodes'. A file always has at least one inode, but it may have more, especially since the first inode only has space to keep track of 12 blocks. (If a file is greater than 12K in size, it must have more than one inode.)

The remaining space in that first inode is where the file system records most of the important information about a file. In particular, the inode contains the following pieces of data:

- The uid of the user who 'owns' the file.
- The gid of the group that 'owns' the file.
- The file permissions, also known as the file mode.
- atime, the time of last access, shown with the **ls -lu** command.
- ctime, the time of last modification of file status information in its inode, shown with the **ls -lc** command.
- mtime, the time of last modification of file contents, shown with the **ls -l** command.

You can see most of this information with the **ls** command, using the **-l** option to get a 'long format' listing, and perhaps the **-c** and **-u** options to see the ctime or atime instead of the mtime. If you really want to know the full details of how an inode works, look at the file `/usr/include/linux/fs.h` on your system for the definition of an inode.

In order to allow for the logical organisation of files, Linux file systems support directories. A directory is just a list of filenames, together with their inode numbers, although the operating system protects you from damaging the system by accidentally editing or deleting directories. To access a file, the system finds its directory entry, reads the inode number, then reads the inode. Whether you then get access to the file depends upon the permissions in the inode.

Since a directory entry simply consists of a name and an inode number, it's possible to have two or more directory entries, in the same or different directories, with the same inode number. These are called 'hard links' and they are similar to, but more reliable than, Windows shortcuts. As the permissions are stored in the inode and there is still just one inode, all links will have the same permissions.

If you execute an **ls -l** command, the output will

TABLE 1: PERMISSIONS

	FILE TYPE VALUE	MEANING
	-	Ordinary file
	d	Directory
	c	Character device
	b	Block device
	l	Symbolic link
	s	Socket
	p	FIFO
Three-letter file owner permissions	r	Read
	w	Write
	x	Execute
	s	Set user id
Three-letter group permissions	r	Read
	w	Write
	x	Execute
	s	Set group id
Three-letter other (world) permissions	r	Read
	w	Write
	x	Execute
	t	The sticky bit

TABLE 2: CHMOD OPTIONS

"-c, --changes"	Like verbose but only reports changes
"-f, --silent, "--quiet"	Suppresses most error messages
"-v, --verbose"	Prints a message for every file processed
--reference= <i>ref-file</i>	Copies the permissions from <i>ref-file</i>
"-R, --recursive"	Changes files and directories recursively
--help	Prints a usage message and exit
--version	Prints a version number message and exit

begin with the columns of characters in table 1.

A dash (-) simply indicates an ordinary file, while a d indicates a directory. An l indicates that this is a symbolic link, which contains the pathname of another file and allows you to manipulate that file indirectly; for example, try to edit that symbolic link (such as vi other-file) and you will actually be editing a file somewhere else. Symbolic links behave very much like hard links. If you look in the /dev directory, you will see that many of the files are of types b and c — these are block devices, which write a sector or block of data at a time (disk drives, mostly), and character devices, which write a character at a time (serial ports, modems and so on).

The next set of nine characters specify the access permissions or mode for the file. Obviously you will want to distinguish between the permissions you should have, as owner of a file, from the permissions that apply to the people you work with and perhaps other people you don't. To support this, Unix and Linux file systems support three sets of permissions:

- user — permissions that apply to the user who owns the file
- group — permissions that apply to the group sharing ownership of the file
- other or world — permissions for everybody else

When you create a file, the inode is set up with the owner id set to your uid, and the group owner id set to your primary group id. So immediately, the system 'knows' the file is owned by you and your group.

Permissions on files

File permissions are fairly straightforward.

r. The r permission allows you to read the file, ie. access its contents
w. The w permission allows you to write to a file, ie. change its contents, delete it and rename it.
x. If the file is a program — and it should be — you can execute it. You would turn on the x permission on scripts that you want to make executable, for example. The sticky bit. The sticky bit is something of a holdover from the days of very small-memory systems. Originally, it was intended to be set on executable program files to get the system to keep the program in memory after it had finished, ready to be run again without the overhead of reloading it. On more modern systems like Linux, it causes the program code to be kept in the swap partition for faster reloading.

The setuid bit. Normally, when a program runs, its effective uid is the same as the id of the user who invoked it. However, when the suid bit is turned on, the effective uid of a running program becomes the id of the user who owns its file. Very often, this is the root account, but sometimes it is some other system account. This mechanism can be used to allow users to run programs that can access files or devices that the user would not normally be able to access. It is commonly used by subsystems like the print spooler subsystem (user lp), and programs that access serial ports and modems, like uucp. Another example is the passwd command:

```
[les@freya2 sbin]$ ls -l /usr/bin/passwd
-r-s--x--x 1 root root 15104 Mar 14 2002 /usr/bin/passwd
```

You can see that this program is owned by root, and has the execute permission turned on for all users, plus the read permission for root, who may need to copy the file (unlike other users who can only execute it). It also has the setuid bit turned on so that when an ordinary user runs it, it changes its effective user id to 0 (the root id). This is so that it is able to update the /etc/shadow file, where passwords are actually stored, and which is inaccessible to ordinary users:

```
[les@freya2 sbin]$ ls -l /etc/shadow
-r----- 1 root root 1104 Apr 16 16:27 /etc/shadow
```

Programs with the setuid bit are a security risk, albeit a necessary one. You can find the setuid programs on your PC with the following command:

```
[root@freya2 root]# find / -perm +4000 -ls
find: /proc/1543/fd/4: No such file or directory
128818 40 -rwsr-xr-x 1 root root 37528 Jan 18 2002 /usr/bin/at
129778 16 -rwsr-xr-x 1 root root 14588 Jul 24 2001 /usr/bin/rcp
129000 12 -rwsr-xr-x 1 root root 10940 Jul 24 2001 /usr/bin/rlogin
129001 8 -rwsr-xr-x 1 root root 7932 Jul 24 2001 /usr/bin/rsh
128924 36 -rwsr-xr-x 1 root root 34296 Mar 28 2002 /usr/bin/chage
```

The setgid bit. This bit is similar to the setuid bit, except that it changes the effective uid of the program to that of the group which owns the file.

Changing permissions with the chmod command

So, how do you change permissions on your file to protect them? That's where the chmod (change mode) command comes in. The syntax of chmod is chmod [option ...] [mode] file ...

The mode can be expressed numerically, as an octal number representing the permissions to be set, or symbolically. The format of a symbolic mode is: [ugoa][+-=][rwxXstugo]

Multiple modes can be concatenated, separated by commas. u represents the user's permissions, g represents the user's primary group's permissions and o represents the permissions of all other users, while a represents all three sets of permissions. The use of a + adds the specified permissions to those the file already has, while a - removes those permissions. Use of = sets the permissions to just those specified.

See table 1 for definitions of modes, but briefly: r = read, w = write, x = execute, X = execute only if the file is directory or execute permission is already set for some user, s = setuid, t = sticky bit, u = the user's permissions, g = the file's group's permissions, o = the permissions for all other users.

If you have a file called accounts.doc that is currently readable by everyone, and you want to make it so that only members of your group can view it:

```
[les@freya2 les]$ ls -l accounts.doc
-rw-rw-r-- 1 les les 19968 Mar 2 21:33 accounts.doc
[les@freya2 les]$ chmod o-r accounts.doc
[les@freya2 les]$ ls -l accounts.doc
-rw-rw---- 1 les les 19968 Mar 2 21:33 accounts.doc
```

This turns off the r permission for others.

In next month's Linux column, we'll take a look at changing permissions in directories. **PCU**

Managing mapped network drives

Link Harris
moves deeper
into managing
mapped network
drives.

Last month, we covered the basics of mapping a network drive. This allows a shared drive or folder stored on another computer to appear on your PC as a local drive in the My Computer display and in Save and Open dialog boxes. This month, we explore some of the more advanced mapping concepts, concentrating on Windows 2000/XP.

Choose your credentials



Mapping with a different username and password can be tricky.

TOP TIP

When you use the Map Network Drive wizard to create a mapped network drive in Windows 2000 or XP, a new window automatically opens, displaying the contents of the mapped network drive after you click the Finish button. If you just want to map the drive and not bother with the window, press and hold the Shift key as you click the Finish button.

Windows 2000/XP's Map Network Drive wizard provides a 'Connect using a different user name' link. Clicking this link allows you to connect to the network resource using different credentials (username and/or password) from the ones Windows normally uses for connecting to that computer (see picture, left). This is handy if your usual network account doesn't have the proper permissions for accessing the network

resource you're trying to map.

Of course, any different credentials must correspond to a valid user account on the computer that holds the resource you're trying to map. In addition, it's only worth using different credentials if the computer you want to map is running Windows NT 4.0/2000/XP. That's because Windows 9x/Me doesn't apply permissions on a per-user or per-group basis, so any account can access all shared resources.

If you use different credentials to map a network drive, Windows will use those same credentials for all subsequent connections to resources on that computer. This applies whether you map another network drive or connect via My Network Places. If the computer that holds the resource you're trying to map is running Windows 2000/XP, you can confirm the account used for the connection by running fsmgmt.msc (Click Start → Run, type `fsmgmt.msc`) on that computer (not the one you're connecting from) and selecting Sessions.

Map traps

Unfortunately, to change credentials, you have to jump through a few hoops. First, when you click the 'Connect using a different user name' link, the Connect As box displays what it claims is the default

username Windows will use for connecting to the mapped resource. This is a furphy. What displays is the local account name you used to log on to Windows. The actual default network username is either the 'different user name' used for mapping a previous drive (as explained above) or, if you haven't mapped a drive from that PC, the name of the account Windows normally uses for that network connection (which can be different from your Windows logon name).

Secondly, you must use the same set of credentials for connecting to all shared resources on a given computer, irrespective of whether you map a resource as a network drive or connect directly via My Network Places. This means if you're currently connected to a network resource, you can't map a network drive from that same computer using different credentials.

If you try this, the Map Network Drive Wizard complains: 'The network folder specified is currently mapped using a different user name and password. To connect using a different username and password, first disconnect any existing mappings to this network share.' You get this misleading message even if the resource you're trying to map isn't already mapped, or if it's a different resource from the one you've connected to via My Network Places. To compound the confusion, entering an incorrect username and/or password can produce the same error message.

In Windows 2000 with SP2 or higher, you can prevent the credential conflict by first closing all network connections to that computer, and then disconnecting any drives mapped from it. I recommend you do the latter by right-clicking either My Computer or My Network Places and selecting Disconnect Network Drive. That way, you can see any mapped drives that don't have a drive letter assigned, which won't display in My Computer. After mapping a drive with the different credentials, those credentials will be used for all subsequent network connections to that particular PC.

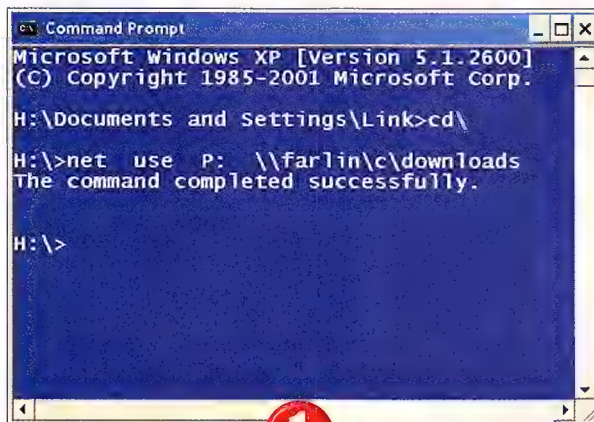
If you want to revert to the credentials Windows 2000 normally uses for that network connection, you may have to log off and back on. Before logging off, it's best to disconnect any network drives created with the different credentials. Otherwise, you'll have to clear the Enter Network Password box that appears at logon for each mapped drive. Open My Network Places windows aren't a problem because at logon, Windows will reconnect them using the usual credentials, not the different credentials.

XP can be more problematic. Sometimes it behaves as described above for Windows 2000

STEP BY STEP: MAP FROM COMMAND PROMPT

1 Open Command Prompt or MS-DOS Prompt. In Windows XP, click Start → All Programs → Accessories → Command Prompt. To map a drive (and add it to the My Computer display), type `net use` drive letter

sharename. The example shown maps the folder downloads on drive C: (share name C), on the computer named farlin, to drive P:.

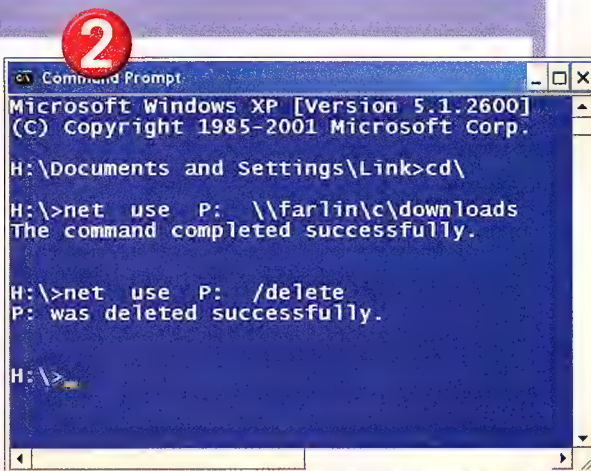


```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

H:\Documents and Settings\Link>cd\

H:\>net use P: \\farlin\c\downloads
The command completed successfully.

H:\>
```



```
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

H:\Documents and Settings\Link>cd\

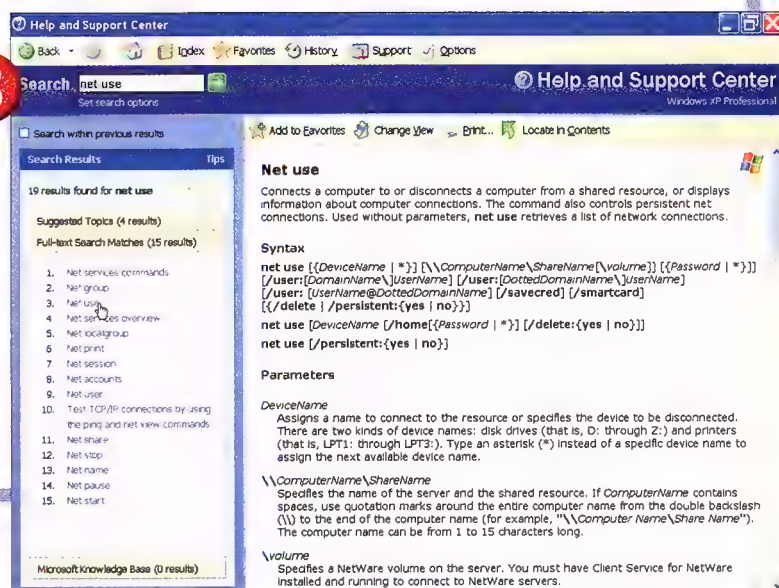
H:\>net use P: \\farlin\c\downloads
The command completed successfully.

H:\>net use P: /delete
P: was deleted successfully.

H:\>
```

2 To disconnect a drive (and remove it from the My Computer display), type `net use` drive letter `/delete` in the Command Prompt window. The example shown disconnects mapped drive P: and removes it from the My Computer display.

3 All versions of Windows have some form of `net use`. Although there's sketchy help available from Command Prompt (or MS-DOS Prompt) by typing `net use` `/?`, Windows Help in NT 4.0/2000/XP gives much more information.



SP2, and other times there's no way you can map a network drive with different credentials. Microsoft is aware of the problem, and Knowledge Base article 812793, 'Cannot Map a Network Drive Under Different User Credentials', states that there's a patch available. However, the patch isn't included in SP1 and it wasn't available from Windows Update as of mid April.

Muzzle mapped drives

If you're running Window 2000 Professional or XP Professional and want to prevent all but the most cluey users of your PC (see the step-by-step guide above) from mapping or disconnecting network drives, you can do this with a Group Policy setting.

1. Click Start → Run, type `gpedit.msc` and press Enter.
2. Drill down to Local Computer Policy\User Configuration\Administrative Templates\Desktop.
3. Right-click 'Remove "Map Network Drive" and "Disconnect Network Drive"' and click Properties.
4. Click Enabled on the Settings tab and click OK.

Enabling this policy removes Map Network Drive and Disconnect Network Drive from both the Tools menu and the right-click menu for My Computer

and My Network Places. It also greys out the Map Network Drive entry on the right-click menu for an explicit share (a drive or folder specifically selected as shared on the server, as distinct from those shared automatically because they're a subfolder of an explicit share).

Finally, it removes both Map Drive and Disconnect icons from the 'Available toolbar buttons' list in My Computer and My Network Places, and also removes either of those icons from the toolbar. The icon changes don't affect open windows of My Computer or My Network Places until the window is closed and reopened.

If you're using Fast User Switching, none of these changes will take effect for other users until after they log off.

You can learn what a policy does by checking out the Explain tab for its Properties sheet. Note that there's an error in the Windows 2000 version of 'Remove "Map Network Drive" and "Disconnect Network Drive"', which incorrectly states that enabling this setting prevents anyone from using either Windows Explorer or My Network Places to connect to a network drive. **PCU**

Make a music video on a budget

Philip Moore
gives you a
crash course in
how to make a
music video
on the cheap.

I promised to look at video compositing this month, but thought it best to first provide some practical tips for use on a creative shoot, which will give us the raw materials we need for compositing later on the PC.

Music videos really are the cutting edge of video technology. Many new tricks and techniques appear in music clips first, and are then repurposed for big-budget feature films, but making a music clip is definitely an art unto itself.

You might want to put together something to showcase your band on video, or maybe to have a chance of being shown on ABC's *Rage* in the wee hours of the morning. Here we focus on shooting the clip and how to do it as cheaply as possible.

Choose your gear

The glossy professional clips you see on TV are mostly shot using 35mm or 16mm film. Some are shot using high-quality digital video formats such as Digital Betacam or DVCPRO. That's out of your league unless you have the money to hire the gear and someone who knows how to use it. Any consumer DV camera will do for our purposes, but it's a great advantage if you can get hold of one that is in DV-CAM format, or at least one that has three CCDs. Having two or three cameras can also be a great help, especially if you're recording a live performance.

Also make sure you have a good, long-life battery, fully charged, and if your camera supports it, a wide-angle lens attachment. You don't need to go overboard with a good external microphone or lighting gear. The less you have to carry, the better, but a light attachment for your camera's accessory shoe could come in handy.

The live gig

The cheapest approach is to video the band during a gig. Get them live on stage doing their stuff, with the audience jumping and the music pumping. However, there are two problems with this approach.

First, the sound would be very loud and would probably distort when recorded by your camera, or your microphones would compress it so that all the bass were missing (but at least the sound is useable). A way around this is to get a direct feed from the mixing desk master output into the camera. This would give you the best possible sound quality, but at the expense of any crowd 'atmosphere' (apart from what spills through the onstage mics). However, this tethers your camera to the mixing console and you wouldn't be able to move around much.

Alternatively, see if you can get the engineer

to record the performance via the mixer direct to DAT tape or even cassette. You could then roam the crowd with your camera, and it wouldn't matter too much if the sound you capture is a bit distorted, as it would only be used as a reference to help sync up the DAT recording when you come to editing later. You should still try to get the best sound possible with the camera, as you may end up needing it.

The same is true if you intend to use a studio recorded version of the song to match with your live footage. Be aware that bands tend to play a bit faster live and it may prove very difficult to get good sync between the performance and the prerecorded version of the song.

The other big problem with videoing a live gig is lack of coverage — that is, getting enough raw footage to work with. This can depend on the style of music, but a music clip generally needs lots of fast cuts. Hence, lots of different shots, different angles, long shots, close-ups, panning and tracking shots, colour and movement. You need plenty of raw footage you can use to cut with, and this can be hard to get with a single camera.

If you can get a second, or even a third, camera to record the same gig from different angles, this would give you that much more to work with. With three cameras, it can be effective to set one up at the back (near the mixer), getting a good wide master shot of the stage, while the other two cameras can be posted on either side down the front, getting different angles and close-up shots, or even having one jump up on stage at key moments to get right in there. Just have a look at how shows like Channel V's *Music Bus* shoot a live band with multiple handheld cameras.

If the gig is the usual 20 to 40-minute set, just keep the cameras rolling and capture everything, even while moving around. It will help you sync up everything later on the computer, and moving shots may even work as special effects. Make sure your batteries are fully charged and will go the distance!

If you are limited to a single camera, there are two approaches you could take. You could stay back and focus on getting a wide angle of the stage, zooming in and out for close-ups of key moments you know are coming. Alternatively, move around as much as possible — get right in the middle of the mosh pit or at the side of the stage, and get as many different angles as you can. If you can shoot more than one performance at the same location, try both approaches to give you the most coverage.

When it comes to editing, you will have an entire gig's worth of stuff to cut down to one or two songs. If you know in advance which songs you will be editing, focus on shooting the singer and other featured moments for that song. You can always cut in shots

STEP BY STEP: CREATE A CONCEPT CLIP



1

3 The finished work was then edited to fit the storyboard. Scenes were edited to include some footage of the dancers and some of the main singer. A graphic was added above and below the video footage. The graphic relates well to the footage, as it accentuates the kids' street look.

1 Even a simple concept clip requires some planning before filming can begin. To create this videoclip, shot at Bondi Beach, we gathered our actors (in this case, a group of singing and dancing youngsters), hired the necessary equipment and even paid fees to the local council for permission to shoot for the day.

2 The clip was storyboarded, which means that all the scenes were planned in advance. Moves were choreographed and rehearsed.

2



3



of the other members taken from other songs — as long as they sync up for a couple of beats, no-one will notice they're actually playing a different song.

The concept clip

The other kind of music clip uses a more dramatic approach. There are particular considerations whether the band is simply 'performing' in a derelict building or enacting a story you've scripted, or you get a group of dancers in.

The first is playback. Presumably, you have a proper recording of the song you want to create the clip for. You will need this song on CD and a portable CD player to play it on, so your performers have something to mime to. One that can skip and pause within a track is desirable so you can cue up the song easily. If you have to use a portable cassette player instead, be sure to record the song to tape using that player. Cassette players tend to run at slightly different speeds, and therefore the music will play back a bit slower or faster than it should, which can really screw up synchronisation later to the original track.

Record the playback directly into the camera as you shoot, ideally via a line in, but via the mic if this isn't possible with your gear. This gives you a reference for syncing up later. Apart from that, it's really much the same as shooting a short film, though perhaps with more coverage and angles required. You could be working to a script or storyboard, but feel free to go beyond this and grab whatever you can to give you plenty of raw footage.

Study clips you like and see how often they cut and what kinds of angles and shots they use. How much do they move the camera? It might be worthwhile hiring a dolly or truck to add more movement to your camerawork, unless you want to go for the frantic, handheld approach. If shooting dancers, for example,

a low-angled wide shot always looks dramatic, but save it for the climax. If you have people who can dance well, don't cut away too quickly. Clips with lots of dance action that cut all over the place are clearly covering up for the lack of choreography or skill.

Editing the clip

When capturing your raw footage to your PC, capture the sound as well. Try to capture everything that looks remotely useable. If you have the same performance from several cameras, capture each camera's footage as one continuous stream. You can then line these up in your software, using the soundtrack of each as a reference, and this will make cutting from one shot to the next very straightforward, while keeping it all in sync.

If you're using a prerecorded version of the music, add this as a stereo WAV file to an audio track, and sync up the sound from your live footage to this. This way, you can use the live sound as a sync reference until the end, when you will mute all those tracks and just keep the pristine CD version of the song.

You often use shots that don't actually belong to a certain musical section, but as long as they appear to match, you can get away with it. This goes for any instrumentalist. Vocals are harder — if you didn't have a shot of the singer singing the right words, you would simply have to cut around this. If this becomes too hard, one solution is to not even bother syncing up the singer. Treat the whole clip like a montage, with the song simply as a soundtrack. You could plan your concept clip this way and not bother with playback while shooting at all. Just shoot and edit the action, and use the music as a soundtrack.

These are just a few ideas to shooting your own music video cheaply and easily. Whatever approach you take, the guiding rule is: shoot everything! **PCU**

Using forms on your site

Helen Bradley
simplifies the
process of
adding forms
to your site.

TOP TIP

Place your form in a table, as we have done in the FrontPage example, to control its layout. Tables let you place prompts in one column and form fields in the other.

Companies such as FormMail provide a form hosting and data handling service for easier form management.

An important way to communicate with visitors to your Web site is to use a form to collect information from them. For example, you might gather visitors' names and email addresses to add them to your email list, or seek feedback on how your site is performing and any problems when using it. Regardless of the type of information you're gathering, the tool you use is the same — a Web form. This month, we tell you why forms aren't as easy to get running as they were some years ago. We also show you how to create a form and we give you some ideas about where to go and what tools to use to make it all work.

In theory, all you do to create a form is slap down a few codes to set up the form elements like checkboxes and text boxes, add your email address so the form data will get sent to you, and upload it to your Web site. However, between concept and successful execution is a major stumbling block — later-version browsers don't support forms. The result is that without some additional work on your part, a simple form might be easy to create, but it won't work the way you'd like it to.

Why forms don't work as they should

The problem is that when a visitor clicks on the Send button, the Web browser is supposed to take

all the form data they've entered and punch it out in an email to the address you specified in the form tag. Early-version browsers did this just fine; later-version browsers don't, and won't, do it. This leaves you with a pretty form that will collect data, but no means of getting the data from the visitor's browser to your email inbox (or anywhere else that you can access the data).

To solve the problem, you need to find a way to get the data sent to you or dropped somewhere you can collect it from. There are a few possible solutions, one of which may already be offered by your hosting service — it may provide some form of automated email form reply option for sites it hosts. If it does, this should already be set up and ready to use, and all you need to do is find out how to use it. Start by checking your hosting company's FAQ or support information, or call the support desk and ask what's available.

If you're a dab hand at CGI scripts and your site supports them, visit Matt's Script Archives (www.scriptarchive.com/formmail.html) and get your hands on FormMail, which is a popular CGI script for handling form data. FormMail relies on your server having the sendmail program available, and you will need to configure the script to set it up. However, it's a good script and it has been around for years, so there's plenty of useful information available on the Web to show you how to run and customise it.

If you run your site on a Microsoft server, you can use ASP (Active Server Pages) to forward the form data via email. To do this, you'll need to write a script, or find one to use and customise it. If you're interested in ASP solutions, check out the ASP forms tutorial at www.wdvl.com/Authoring/ASP/FormHandling/ or visit <http://cybercoded.com/RFIForm/> for a downloadable solution.

Other methods to get the form data sent to you include using an online service that hosts the form for you then emails the results as they are received. This is similar to the system which you would use at your own hosting service, but it's provided by someone else. There are few free services left because spammers also use them, but you'll find some with small service fees like FormMail.To (\$US1 per month with a six-month minimum from www.formmailto.com), and the free Response-O-Matic from www.response-o-matic.com. Free services typically include some form of advertising, and paid services are generally advertising free.

FrontPage does forms

Another solution, if you have Microsoft FrontPage and the server extensions available, is to use FrontPage's own tool to manage your form. FrontPage offers three options for delivering data entered by

FormMail.To
Premium Service

Professional quality e-mail forms for \$1 per month.

NEW! SafeMail.To
Secure E-mail Forms! Click here

FAST! Create your own customized Web browser e-mail form and start using it in minutes.

Data entered on this form will be sent to your e-mail account. You don't need any CGI programming on your Web site to use FormMail.To. Just link your Web page to your customized form with an HTML tag instead of using "mailto" links

FLEXIBLE! Instead of simply having "Subject" and "Message" in your e-mail form, you can specify whatever data you need. Your forms can be anything from "feedback" comments to customer surveys to product ordering forms. You can use "pull-down" menu selections and checkboxes to make your forms easier to use and to control the allowed entries. Unlike the free service, you can download the form HTML to your own site, and if you can't get the exact form you want with our form generator, you can edit the HTML (or even create a new form) any way you like.

RELIABLE! The data entered on your form is automatically validated according to the data types or "edit" patterns that you specify for each field. This unique feature allows you to specify which fields are required, for example, but it also allows you to control the precise content allowed in each field with sophisticated data verification rules. If any invalid data is entered in the form, the user must return to the form to correct the errors before the form will be submitted. No more unusable data!

STEP BY STEP: FRONTPAGE FORMS

Microsoft FrontPage has tools for building forms and handling the data you receive from them. In the absence of another server-based solution, they're a good bet for anyone whose site has the FrontPage extensions available.

2 Type the intro to the form. Add a two-column by two-row table to line up the form objects (tab for extra rows). Click in the first column and add the prompt, such as Your Name. Click in the right column, go to Insert → Form →

1 Open the page on your site where the form is to go and click in the position to insert it. Click Insert → Form → Form to add the form tags and the Submit and Reset buttons. Click immediately to the left of the Submit button and press Enter twice to make some extra space.

3 Right-click the Textbox field and select Form Field Properties. Type a replacement name for the textbox, then add an initial (default) entry, and set the desired width. Repeat the process and add another Textbox for the Visitor's email address, and add any other single-line text entries you will need.

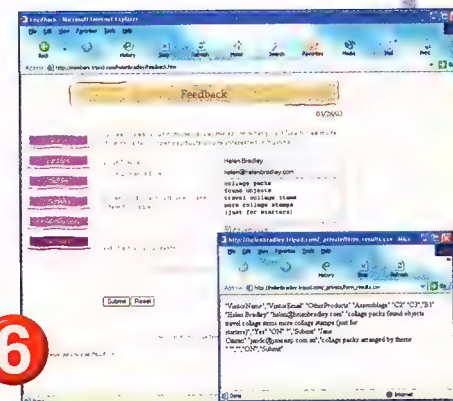
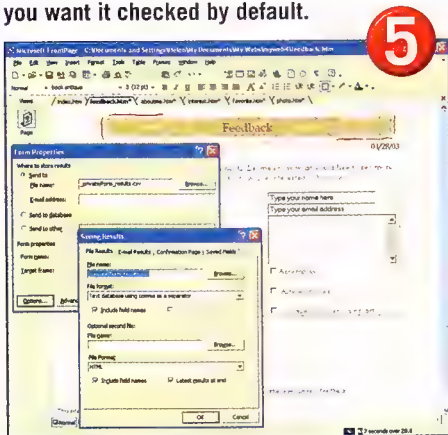
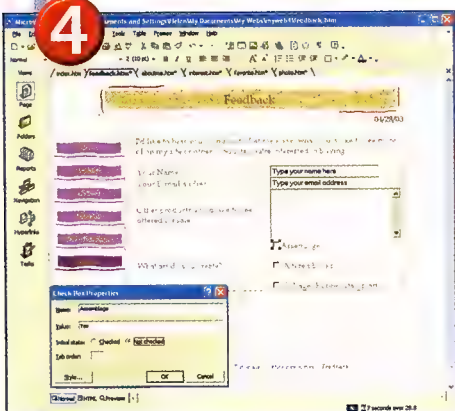
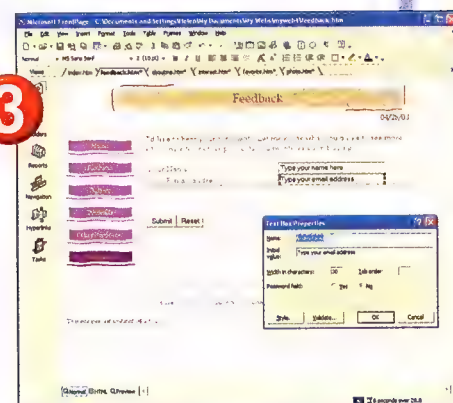
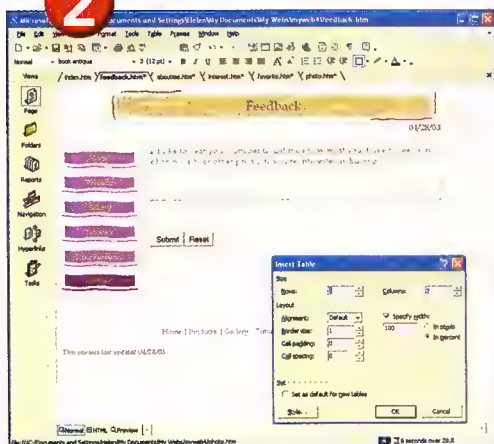
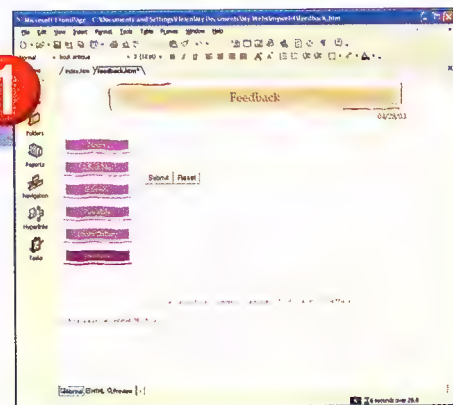
4 Use the same process to add a Text Area wherever your visitor will be required to type multiple lines of text. Use Checkboxes to enable visitors to select multiple items (or none). Set a name for each checkbox so you'll know what they've checked, and use the Checked option if you want it checked by default.

5 Continue to add other items such as Option buttons or a drop-down box for other selections. When you're done, right-click the form and select Form Properties, click 'Send to' and type a filename for the file to gather the form results in. Click Options to specify other settings for the results file.

a visitor on your Web site. The first two are writing the data to a database on your server or emailing it to you; however, both these solutions require not only the server extensions, but also additional tools to be set up on your site. The third method is to have FrontPage save the form data to a text file on the server which you can then access yourself at any time. This latter solution does not require any additional setup, so it's the one we'll look at.

The step-by-step example shows the basics of setting up a form on a FrontPage Web site. In addition to the form controls used in the example, you can

also use option buttons and drop-down lists. Set the properties for these the same way you do for those controls shown. You can also set properties for the Submit and Reset buttons on the form, so they show your choice of text. The form data you receive can be accessed at any time from your server as shown, and you may like to write a macro in Word to convert it to a format you can use. Even if your site isn't written in FrontPage, you can create just the feedback page in FrontPage and link it to the other pages on your site. When you upload it to your server, it will integrate with the other pages on your site. **PCU**



6 Save and upload the page to your server. Test it by viewing the page and filling in the form. Click Submit to send the form data to your server. You can now locate the file and open it to see the data you've entered (other entries will be appended to this file over time).

Command your PC

Link Harris
explains how
to change file
attributes from
a Command
Prompt window.

TOP TIP

In the default installation of Windows, My Computer won't display files with a Hidden attribute. You can change this by clicking Tools → Folder Options and selecting 'Show hidden files and folders'. However, Windows still hides any files that have both the Hidden and System attributes. To display these files as well, untick 'Hide protected operating system files (Recommended)' before clicking OK.

ON THE CD

We've included Open Command Window Here for Windows XP and Command Prompt Here 1.1 for Windows 95/NT 4.0/2000 on this month's cover discs.

This month's tutorial follows on from the introduction to Command Prompt in my Windows NT/2000 column on page 85 of the May edition. The material in that column applies to Windows XP with one exception: XP has its own exclusive version of Tweak UI (www.microsoft.com/windowsxp/pro/downloads/powertoys.asp), which is on the June issue's cover CD.

The Command Prompt option in XP's Tweak UI lets you configure AutoComplete for file and folder names, as explained in my May tutorial. This gives a GUI alternative to editing the Registry described in tip 28 on page 74 of the June issue.

The material in this month's tutorial applies to Windows NT 4.0, 2000 and XP Professional and Home Edition.

Attributes

A file or folder can have up to four attributes: Read-only, which means you can't edit the file; Archive, which is used to tell backup software whether a file has been changed since the last backup; System, which indicates a critical Windows file or folder; and Hidden, which hides a file or folder from casual viewers.

Of these four, only Read-only can be consistently controlled from the General tab when you right-click the file or folder in My Computer and select Properties.

You can also control the Hidden attribute, but only if the file or folder doesn't have the System attribute set. Neither the System nor Archive attributes are visible on the General tab. You can view all the attributes of a file or folder in a My Computer window by adding an attribute column to the default collection. To do this right-click anywhere in the column headings and click Attributes.

The previous paragraph applies to Windows 2000/XP. The General tab in NT shows all the attributes but won't let you change the System attribute, and the Attribute column is included by default in NT's My Computer display.

You can view and change all four attributes in all three operating systems by using the Attrib command from a Command Prompt window.

Using Attrib

To view the attributes of a file named resource.txt, type `attrib resource.txt` and press Enter in a Command Prompt window. To remove the Archive attribute, for example, type `attrib -a resource.txt` and press Enter. To hide the file resource.txt and make it a read-only system file, type `attrib +h +r +s resource.txt` and press Enter (see picture).

```
H:\WINDOWS\System32\cmd.exe
D:\WINNT>attrib resource.txt
A      D:\WINNT\Resource.txt

D:\WINNT>attrib -a resource.txt

D:\WINNT>attrib resource.txt
D:\WINNT\Resource.txt

D:\WINNT>attrib +h +r +s resource.txt

D:\WINNT>attrib resource.txt
SHR      D:\WINNT\Resource.txt

D:\WINNT>
```

The Attrib command gives you full control over the four attributes of a file or folder.

Current directory in Command Prompt

If you're working in a folder in My Computer and want to use the Attrib command, it's handy to be able to open Command Prompt with that folder as the current directory. Among other advantages, this avoids having to type long pathnames. By default, however, Command Prompt opens at the root folder of the drive where your Windows files are installed (in Windows NT 4.0/2000), or the current user's subfolder of Documents and Settings (in Windows XP).

Fortunately, Microsoft offers a utility as part of its unsupported PowerToys suites that adds the 'current directory' option to the right-click menu for a folder. For XP, it's called Open Command Window Here (www.microsoft.com/windowsxp/pro/downloads/powertoys.asp or this month's cover discs). After downloading CmdHere.exe, double-click the file to add Open Command Window Here to a folder's right-click menu.

The PowerToy for Windows NT 4.0/2000 is called Command Prompt Here 1.1 (www.microsoft.com/networkstation/downloads/PowerToys/Networking/NTComPrompt.asp or this month's cover discs). Download W95doshere.exe into its own folder and double-click the file to extract the archive. Although the Readme.txt file says Command Prompt Here 1.1 is for Windows 95 and NT 4.0 (but not Windows 98), it works fine in Windows 2000. To add Command Prompt Here to a folder's right-click menu, right-click Doshere.inf and click Install. The only way to remove the feature for any flavour of Windows is to uninstall Cmdhere PowerToy For Windows XP (or Command Prompt Here) from the Add or Remove Programs applet.

Ashampoo PowerUp 2000 provides a freeware alternative for Windows NT 4.0/2000. The software is described on page 106 of the April edition and is included on that issue's cover CD. You can check out the commercial version PowerUp XP for Windows NT 4.0/2000/XP at www.ashampoo.com.

PowerUp calls its 'current directory' option 'Open Console in Folder'. To add this to a folder's right-click menu, select PowerUp's System\Windows → General tab. Move to the User Interface folder and tick 'Right-click option to open command prompt console'.

Using any of these utilities to enable the 'current directory' option adds it to the right-click menu for all users of the PC. **PCU**

Xara3D up and running

Xara3D is designed to create 3D text and titles that can be used on your Web site, in other graphics, or imported into a video program. When you install and run the program for the first time, 'Xara3D 3.0' appears onscreen. Click the Cursor button on the toolbar and you can edit this text. Backspace to delete the existing text and then type in something new. Use the options along the bottom for Font, Bold, Italic and so on. Alternatively, click the 'T' Text button and edit your text in the dialog that appears.

Giving text its 3D appearance is easy. The button with the red 'E' on the toolbar (next to the 'T' button) controls the extrusion, which gives the text its 3D look. You can control this using the 'Depth' control at the bottom of the dialog. To change the text's colour, click on the colour square and select a new one from the pop-up palette. The shape can be Gloss (with a bit of a shine to it) or Matte (no shine).

The next button on the toolbar is the Bevel button, marked with a 'B'. This controls the edges of our 3D shape. Texture is one of the key features of 3D software. This is the process of wrapping a 2D image around your 3D shape to give it a particular look. To cover your text with a texture, click the Load Texture button. You can select any JPG, BMP, GIF or PNG file as a texture. The program comes with several sample

textures for you to use in JPG format, and you should find these in C:\Program Files\Xara\Xara3D3\Textures. The sliders then control how the texture is applied. Move them around to see the texture shift and rotate in the preview window.

To shade your text, use the shadow options. You can alter the colour of the shadow, the level of transparency, and the blur to define the soft edges of the shadow. For further control over the angle of the drop shadow, use the Lights control.

The next button, 'A', is for animation. Xara3D has presets for Rotate, Swing and Pulsate. Control the speed using the 'Frames per second' and 'Frames per revolution' fields.

Finally, the light bulb button controls the lights in your scene. The lights and their directions are indicated by large arrows. The blue light controls the drop shadow, and the others light your shape. Move these around to see how they alter the look. You can change the colour of the lights using the options in the View menu. You can also add a background texture from within the View menu (see step 5 below).

Once you have your text how you want it, double-check the Quality settings in the Windows menu (high settings work fine on a fast computer, in all cases), and you can then export it as an image file, or an animation in GIF or AVI format. **PCU**

Philip Moore
walks you
through
creating
3D text.

ON THE CD

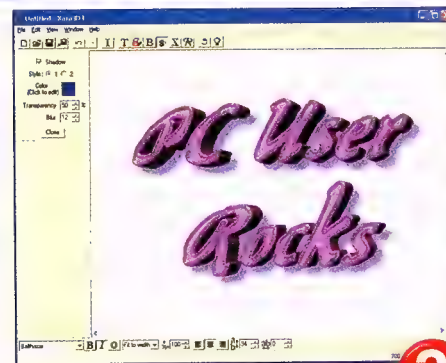
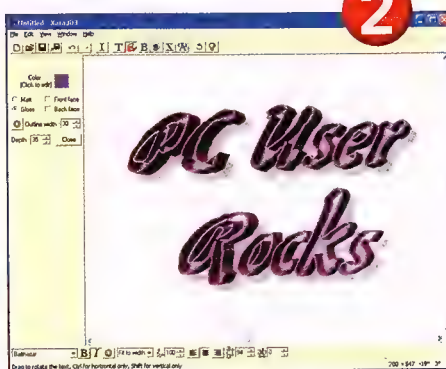
You'll find the full working version of Xara3D 3 free on this month's cover discs.

STEP BY STEP: CREATE 3D TEXT

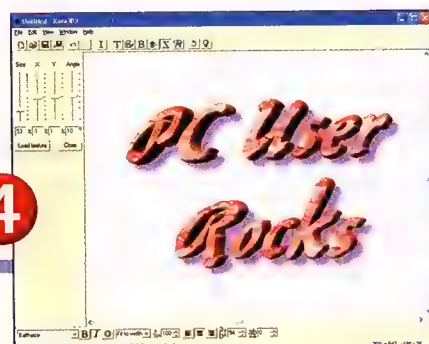


1 Rewrite the default text to create a new 3D text image.

2 Use the Extrude controls to turn off the front and back face of the text, and change the colour.



3 Control the drop shadow colour, transparency and blur in your text.



4 You can apply a 2D texture using almost any image file. There is also good control over how the texture is applied to your shape.



5 You have some control over the four standard lights in Xara3D. Arrows show you what directions the light is coming from.

Your technical problems solved

Help Station's heavyweights will knock out your PC problems.

Linking cell data

Q Is there a way to merge data from two different columns in Excel? For example, I have three columns: A, B and C, where column A contains a single letter (such as J), column B contains a number in the range 1 to 4,000, and column C contains three characters (such as LAX). I want to combine the data so that instead of having three different cells, there is only one. So, for example, the first cell will contain J1LAX. Will I have to do this one cell at a time, or is there a way to do an entire column at a time?

— C Haynes

A You can do this very easily. Begin in column D; if it isn't empty, click the column letter and click Insert → Column to add a new blank column. Now, in cell D1, type **=A1&B1&C1**. Copy this down the full length of column D and you'll see exactly the result you want.

However, if you were to remove columns A, B and C, disaster would strike immediately! So, select all the cells in column D and click Edit → Copy. Leave the selection as it is and click Edit → Paste Special → Values and click OK. This fixes the values in column D so you can remove columns A, B and C. Do this by clicking the column letters to select them, then clicking Edit → Delete.

— Helen Bradley

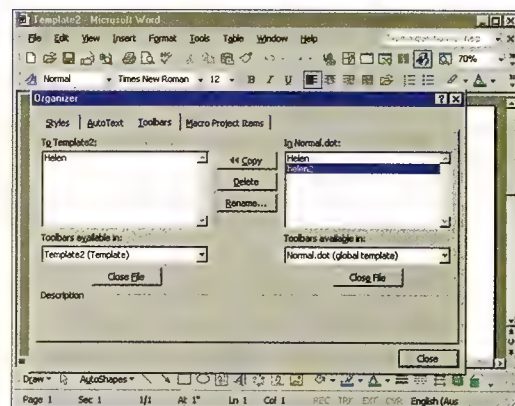
Formatting fractions in Excel

Q Is there a way to make fractions display with the numerator as superscript and the denominator as subscript in Excel?

— Keith Partridge

A This is an interesting question. You can enter a value like 1 15/16 into Excel, and if you click Format → Cell → Number tab → Fractions, you can have it remain formatted as 1 15/16 instead of 1.9375. However, as soon as you click the cell to format the actual fractional parts, the number 1.9375 appears, so you can't select the 15 or 16 part of the number, because they simply don't exist. But if you enter the fraction by prefixing it with a single apostrophe it appears as 1 15/16 and you can select each individual part of the fraction and format it using Format → Cells → Font and selecting Superscript or Subscript from the dialog.

Although you may not expect the value could then be used in a calculation, it can in some circumstances. If you try to add the contents of the cell using **=SUM**, it won't work, but you can multiply, divide, add and subtract it using formulas of the type **=A1*2** (where the fraction is placed in cell A1).



Word's little-known Organizer dialog allows you to copy toolbars, styles and macros from one document to another.

Because of this inconsistent behaviour, I wouldn't recommended you use this approach. Instead, stick with ugly but functional fractions.

— Helen Bradley

Typing fractions in Word

Q When typing fractions in Word, I press Ctrl-Shift-(=) before typing the numerator to superscript it, then Ctrl-(=) before typing the denominator to subscript it. But I have trouble returning to normal text after doing this. Is there a way to do this more easily than copying a letter printed in normal type and pasting it alongside the denominator?

— Keith Partridge

A Here's how to type fractions in Word in five easy steps:

1. Press Ctrl-Shift-(=) to type the numerator in superscript.
2. Press Ctrl-spacebar to return to normal text.
3. Type the slash symbol.
4. Press Ctrl-(=) to type the denominator in subscript.
5. Press Ctrl-spacebar to return to normal text.

— Helen Bradley

Moving Word toolbars

Q My computer has one partitioned hard drive set up so that Word 2000 is running on one partition under Windows Me and also on the other partition under Windows XP. The XP partition is new and I want to bring my custom-designed Word 2000 toolbars, with their custom icons, from Word on the Me partition to the XP partition. As I

help station

**WANT TO?
ASK A
QUESTION**

Get an answer to your PC problem from our team of experts.

Has your question already been asked by another PC User reader? These Help Station pages contain highlights from our Web site. Visit us online where you can quickly and easily browse through all the questions submitted by other readers — or ask one of your own.

www.pcuser.com.au
We're here to help you!

understand it, toolbars are stored in the Registry, rather than in Word or Windows. I am unsure how to transfer them. Can you help?

— C Wade

A The toolbars aren't actually stored in the Registry and they're very easy to move, once you know how. Open Word on the Windows Me partition and click File → New, click the Template option button (to create a new template document) and click OK. Now, click Tools → Macro → Macros → Organizer → Toolbars tab. Click each toolbar in your Normal.dot template and click Copy to copy it to your new template file. Close this dialog and save your template to a floppy disk using the File → Save As command. Make sure the document type is set to Document Template (*.dot) and choose your floppy disk as the location for it.

Now open Word on the other partition (or another computer) and open your template file. Use the same Tools → Macro → Macros → Organizer → Toolbars tab dialog to copy the toolbars from the new template to Normal.dot so they'll be available to all new documents you create, based on this template.

— Helen Bradley

Moving Word AutoText information

Q I use the AutoText function in Microsoft Word 97 at work to hold frequently typed information, such as names and addresses and document templates. How can another computer in the office use the data I have set up as AutoText on my computer?

— Dean Adams

A The solution to this problem is similar to the that of the preceding question. Word's AutoText entries are accessible from the Organizer dialog just like the toolbars. To move them from one computer to another, make a new template file, copy them using the AutoText tab of the Organizer dialog (Tools → Macro → Macros) and save the file to disk. At the second computer, reverse the process and copy the entries to that user's Normal.dot template.

— Helen Bradley

Formatting text

Q I wish to reformat an email newsletter which I receive as a text document in Word 97, to make it look more attractive. When copied into a Word document, the newsletter format does not use the entire page width, which makes the resulting page very long. I have tried the AutoFormat, Style and Style Gallery features, but I can't get them to work properly. How can I strip formatting from an HTML document to use in Word?

— Rajesh Lal

A I think you're halfway there. The following process strips all unwanted paragraph markers from the text and makes it fit the page neatly.

1. Copy the text from your email newsletter into

a new Word document by clicking Edit → Paste Special and selecting the Unformatted Text option. Alternatively, you can open the HTML file in Word and immediately save it again as a Word document.

2. Click Format → AutoFormat and select General Document from the document type drop-down list.
3. Click the AutoFormat Now option button.
4. Click the Options button and tick the checkboxes for all the options in the Apply section of the dialog, and any in the Replace area you want to use (in particular, the Smart Quotes setting).
5. Click OK twice. Your document will be reformatted automatically.

If you don't like the changes, click Edit → Undo to remove them. To format headings manually, click in a heading line and press Ctrl-Alt-1 for Heading1 style, Ctrl-Alt-2 for Heading2 style, and so on.

— Helen Bradley

The Briefcase and Access

Q I cannot synchronise any folder using Briefcase when the folder contains an MDB file. The MDB file in question is the database file of a program I bought, which simply contains client details and appointment books. On the PC with Microsoft Access installed, the MDB file's icon looks like the Access database icon, but cannot be opened by any file, including Access. When I try to synchronise the file using Briefcase, I get the message 'unknown application'.

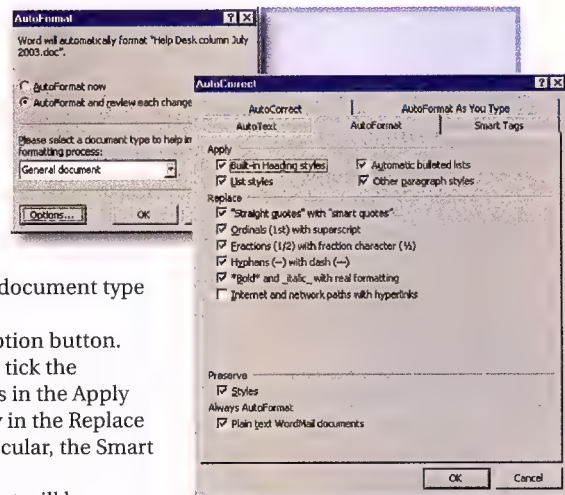
— Steven Du

A Sounds like you're running into a couple of problems. First, if the MDB file is a part of a commercial program you bought, it may well be locked or password protected to prevent unauthorised access. Many commercial applications do this, so you can only gain access to the program through a standard entry method.

Second, while the Briefcase treats most files simply as files and does nothing more than copy one version over another during synchronisation, it works quite differently with files created using the Jet database engine, such as Access MDB files. With MDB files, the Briefcase offers complete replication, which means it can update the actual records in the database, bringing both copies into sync.

So, it seems you may be running into problems because you have a protected or locked MDB file you're trying to replicate using Briefcase. I recommend you read the Microsoft article on Using Briefcase Replication at <http://support.microsoft.com/default.aspx?scid=/support/access/content/repl/replbriefov.asp>. Also, use the Replication Site Tree link at the top of that page to find out more about replication.

If you have a full copy of Microsoft Access, try creating your own database (just something >>>)



Word's AutoFormat option will strip much unwanted formatting from text and result in a neater finished document.

ON THE CD

On this month's cover discs, you'll find a copy of WINX32, a freeware utility which will let you launch multiple programs with a single click.

GRAPHICS Q&A

Degrading JPEGs

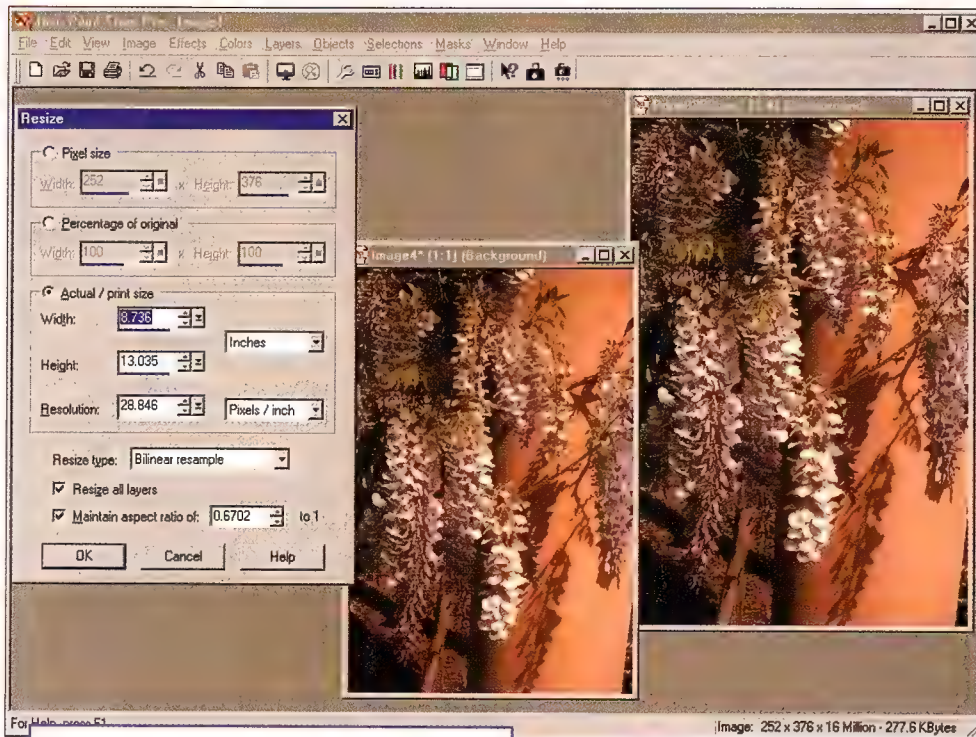
Q I am downloading JPEG images from my digital camera and have noted various articles mentioning that if these images are altered and re-saved in JPEG format, quality will be lost. In these instances, it has been suggested that saving them to TIFF format will allow me to retain the original quality throughout the change process. But if I simply want to change the name of a JPEG file, will that have any effect on the quality of the file?

— Stephen Koerber

A It's quite correct that each time you open, modify and save a JPEG image, you can introduce more distortion. For instance, if you have a blue sky and save the image with high compression (lossy), then it will open with some unwanted pixels in the sky. Modify and save this file and next time, you'll have more unwanted pixels. Eventually, they'll start to clump and will take on a life of their own.

The good news is that changing the name has no effect on the contents of the file. By all means, use TIFF or the best quality format that's available right from the camera, through the editing process and right up until you create the end file (in whatever format you choose). And, even then, keep a copy in the highest quality format in case you have to edit it again.

— Paul Zucker



The image on the right is 6M in size, while the one on the left is 277K. For onscreen viewing, the one on the left is all you need.



very simple) in a new folder, and then try synchronising that database using the Briefcase.

— Rose Vines

Access user-level security

Q I set up a user-level security password system on an Access database. When I open the database from my computer, where the database was created, it asks for the password. When the database is opened on another computer, it opens without asking for the password, but nothing is accessible. How can I get Access to ask for the password to allow the user the accessibility which they were granted? When any of the macro buttons are clicked, a message pops up that the records cannot be accessed.

— Luc Caruana

A It sounds like you've copied the database (the MDB file) to the other computer but not the workgroup security file (the MDW file). Access stores user permissions within the MDB file, but user and group accounts and passwords are stored separately in the MDW file. You'll need to copy both files to each computer using the database. Normally, the MDW file is stored in the same folder as the database itself; if not, do a search for *.mdw files on your computer.

You may find it useful to read the Access Security Tutorial at www.moretools.com/lessons/access_security.htm to ensure you've taken all the steps necessary to implement user-level security correctly.

— Rose Vines

Clip art not installed

Q I installed Office 2000 disc 1 and it worked perfectly. I later installed Office 2000 disc 2 (with Publisher) and now, whenever I want to use clip art from that disk, I am prompted to insert the CD. I thought I fully installed this disk to my hard drive but it still seems to want the disk.

— Peter Lawrence

A This is a known problem with Office 2000 disc 2. When you choose a typical installation for Publisher 2000, the clip art files aren't installed on your hard disk. These files take some 270 megabytes of space, so if you have room for them and want to install them, place your CD in the drive and click Start → Settings → Control Panel and double-click the Add/Remove Programs applet. On the Install/Uninstall tab, select Microsoft Publisher 2000 and click Add/Remove. Click 'Add or remove features' from the Office dialog, then select Office Tools → Clip Gallery → Clip Files and set it to 'Run from my computer'. Click Update Now to install the clips.

— Helen Bradley

PowerPoint file bloat

Q I decided to use PowerPoint to make a slideshow diary of my trip to New Zealand. I have a new digital camera so I took lots of images. Everything was going fine until about my 270th slide. I found I could still create slides but when I saved the presentation it started to take longer and longer to save, until it was taking 20 minutes before I could get any response back from my computer. Fortunately, I had burned over half to a CD so I decided to try to reduce the size of the file, but I could not delete the

first 100 slides. I checked the presentation size and found, to my horror that it was 584 megabytes. Is there any way I can resolve this problem? Is there a program I could use in future which would be more suitable for my purpose?

— Vicki Larkey

A You have a lot of things going on here and the first we need to address is image sizes. When you're shooting digital pictures, particularly if you're taking high-quality images on a two or three-megapixel camera, you're taking huge photos with lots of detail. You need all this image data if you want to produce printed enlargements bigger than 4 by 6in (10 by 15cm); for example, 8 by 10in (20 by 25cm) images. This is in part because your printer or your photo service will use a resolution of 150 pixels per inch.

In contrast, when displaying an image on a computer screen, you need only around half this resolution, about 72 pixels per inch. So, I'm betting your images are way too big for the purpose you are using them.

Use a good graphics program such as Paint Shop Pro and adjust your image size (your digital camera may well have come with photo editing software that allows you to do this, too). In Paint Shop Pro, to adjust the size, click Image → Resize and select the Actual/Print Size option. Set the resolution to 72 pixels per inch and then set the final screen size and click OK. Save this image with a new filename so you don't overwrite the original file. You will use these smaller images in your presentations — keep the large ones for when you need to get prints.

Another issue is that your computer has only 256M of memory — not a lot when you're trying to work with really large documents, such as your PowerPoint presentation. The fact that you managed to create a 270-slide presentation with a file size of 584M is nothing short of miraculous in my book. I limit any slide presentation to around 100 slides maximum — it is possible to hyperlink one presentation to another so your last slide could be 'Click here to continue with my trip' or something similar, and viewers will click it to see the next presentation of 100 slides. Splitting up the presentations will not only make them easier to create (your computer won't be so pressed for resources), but if you lose anything, you'll lose only one-third of your presentation, not all of it.

For now, I would try to break up the presentation.

1. Reboot your computer and close down everything except PowerPoint.
2. Create a new, blank presentation and click Insert → Slides From Files and click the Browse button.
3. Locate the presentation with your 270 slides in it and click Open.
4. In the middle right of the screen,

you'll see two buttons. Click the right one to display the slide titles in the dialog.

5. Choose the first 50 or so slides by clicking the first one, using the slider to find the 50th, and holding Shift as you click it.
6. Click Insert and then Close.
7. Save this presentation and repeat the process (next time, choose the 51st to 100th slides) to split your original presentation into lots of little ones.
8. Use a new blank CD and burn these onto it (you may need more than one).

If you wish, you can then systematically replace the old (large) images with smaller ones, or simply use smaller versions in future.

As to your question about which programs to use, there are plenty of programs that will create slideshows of your images, but if you know and like PowerPoint, why not stick with it? Just manage the size of your presentations a little differently in future. I say this in part because a feature of the soon-to-be-released PowerPoint 2003 is that it can be used to burn presentations to CDs and set them so they will autorun. You might consider upgrading your version of PowerPoint when this new version is available, so you can make use of this feature.

— Helen Bradley >>>

GRAPHICS Q&A

Layers in Photoshop

Q I am starting to get the hang of Photoshop, but while tutorials and other books I have are good, nowhere do they explain how to create layers from a simple JPG graphic or photo of my own. Most tutorial images include built-in layers that work fine when I'm following the instructions, but I want to manipulate images on my own. How do I do this and how do I create a simple montage of images to save as a file or to print?

— Mike Barber

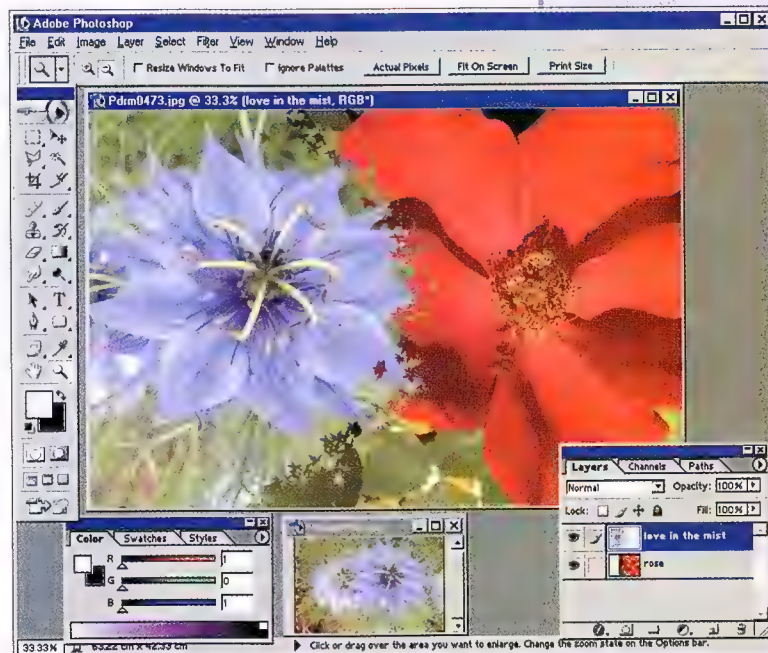
A Open your JPG image in Photoshop and display the Layers tab in the Layers/Channels/Paths palette by clicking Window → Layers. To add a new layer, click the small triangular button at the top right of the dialog and select New Layer. Type a name for the layer, choose a colour and/or a blend mode and an Opacity value (or simply accept the defaults), then click OK. To add another image as a layer into this image, open the second image, click the Move tool and drag the second image into the first — it will appear as a new layer. You can double-click the background layer of any image to rename it, so it can be moved and altered.

To create a collage, add images to different layers, then alter the opacity of the layers and move the images around until you get the effect you're looking for. You'll probably want to remove parts of the image on the top layers so that parts of the images underneath show

through. When saving your file, save a version in Photoshop's default PSD format because this format saves layer information in the file. The JPG format does not save layer data and simply flattens the image into a single layer.

— Helen Bradley

Photoshop's layers palette allows you to add multiple layers to an image and manipulate them.



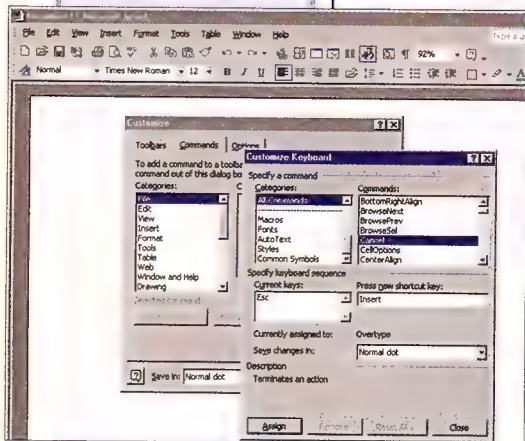
WINDOWS Q&A

Running XP diagnostics

Q How do I run the diagnostics tests in Windows XP Home?
— Toni Agapito

A 1. Click Start → Help And Support.
2. In the Search window that appears, type diagnostic and click the green arrow.
You'll get instructions and information about various diagnostic tests.
— Jan Wikström

It is useful to disable the Insert key so it can no longer be used to select Overtyping mode.



Paint Shop Pro file format

Q I have Windows Me, Paint Shop Pro 6.02, Animation Shop 2.02 and a Canon scanner. Until recently, I have been able to scan a photo into Paint Shop Pro, work on it and save it as a PSP file into My Documents. Recently, after playing around with the animation tool, when I scan a photo into Paint Shop Pro and save it, it is saved as an animation file. How can I stop this from happening?
— John Alexander

A Paint Shop Pro has probably altered its default file format for saving files. Change this by scanning an image and when you try to save it, go to File → Save As and check you have Paint Shop Pro Image (*.psp, *.jpl, *.pft, *.tub) selected in the Save As Type drop-down list, then save the file with the extension PSP. This should solve the problem.
— Helen Bradley

Image rollover

Q I have two images, joinoff.gif and joinon.gif, and I want to make an image rollover using them. How is this done?
— Nigel Kree

A You use a simple piece of JavaScript to do this. In the Body area of your Web page, add this code:
`<a href="javascript:;" onMouseOver="document.rollover.src='joinon.gif';" onMouseOut="document.rollover.src='joinoff.gif';">`
`</a>`

What this script does is display the image joinoff.gif on the page when the page loads. Then, when the user holds their mouse over the image, the onMouseOver event is triggered and the image joinon.gif is displayed. When the user's mouse moves away again, the onMouseOut event is triggered and the original image, joinoff.gif, is displayed again.
— Helen Bradley

Word gobbles up text

Q I use Office 2000 on Windows 98. Occasionally, I do something that alters my keyboard behaviour so that pressing the spacebar causes the text immediately following the cursor to delete, rather than inserting a space. Is it possible to undo this without rebooting the computer?
— Peter Kewley

A Pressing the Insert key causes this behaviour. The Insert key is a toggle key that switches between Insert and Overtyping modes. In Insert mode, anything you type at the insertion point shifts subsequent text over. In Overtyping mode, each character you type replaces (writes over) the next character on the current line,

which is why pressing the spacebar is 'chewing up' characters rather than inserting spaces. To stop this from happening, simply press the Insert key once to switch back to Insert mode.

As a long-term solution, I like to disable this feature so it no longer works (like you, I find it a nuisance). To do this, click Tools → Customize → Keyboard, select All Commands from the Categories list and choose Cancel from the Commands list. Now, click in the Press New Shortcut Key area and press the Insert key. When the word Insert appears there, select Assign then click Close twice to finish.

Now pressing the Insert key will do nothing and it can no longer select Overtyping mode.
— Helen Bradley

Mailing labels from Excel

Q Is it possible to print labels from data in an Excel spreadsheet? I have a spreadsheet with names and addresses along with lots of other bits of information and I want to construct a mailing label from it. Is this possible?
— Dimity James

A Yes, it is possible. It will help if the data headings for the worksheet are in Row 1 with the actual data itself (the list of names and addresses) below this. If so, you can create the labels in Word 2002 if you first open a new document.

1. Next, click Tools → Letters and Mailings → Mail Merge Wizard. In step 1 of the wizard, select Labels as the type of document to work on and click Next.
2. In step 2, choose the 'Change document layout' option and click the Label Options link. Pick your label stock number from the list and click OK. Click Next.
3. In step 3, click the 'Use an existing list' option. Click Browse and locate your Excel worksheet, then click Open. When the Select Table dialog appears, choose the sheet which contains the data and click OK.
4. A table will appear with all the entries in the database selected. Uncheck any for which you don't want to create a mailing label and click OK to continue. Click Next.
5. Click Address Block, select a format for the address to appear on the labels, then click Match Fields. Here you will specify how each of the fields in your Excel workbook relate to the information required — check the current settings and alter them if required (you only need to worry about the fields that contain the name and address data). Click OK twice when you are done, then click Update All Labels to add this format to all the labels on the screen and click Next.
6. Now you can view the labels to see if they look OK and if so, click Next to finish the merge by merging to a new document or directly to the printer. If the labels aren't correct, click the Previous link to return to the previous steps, make the required changes and click Next to work forward through the steps again.

— Helen Bradley

File size limit in XP

Q I have a dual-boot PC with Windows XP Pro on C: and Windows Me on D:. I record and edit video. At the moment, Me will allow multiple seamless 2G files, whereas XP Pro stops recording at 4G, or 21 minutes and 24 seconds. Both are on FAT32, but if it's true NTFS will allow unlimited file sizes or multiple seamless files like Me, I will dump Me and convert to NTFS.

— Keith Saunders

A The 4G file size is indeed a limitation of FAT32 under XP Pro. NTFS, which is the native file system of all XP versions, has a maximum file size of 18,446,744,073,709,551,616 bytes, in theory. In practice, Windows XP limits volume size on NTFS partitions to 232 clusters minus 1 cluster. If your cluster size is the default 4 kilobytes, that works out at 16 terabytes minus 4K, which should be quite comfortable for your application.

You need to watch a few things when converting from FAT32 to NTFS. See the Knowledge Base article at <http://support.microsoft.com/?kbid=314097>.

— Jan Wikström

Launch multiple apps with one click

Q How can I start multiple programs at the same time? For example, I want to start Cheating Death and Counter-strike by clicking just one icon instead of two.

— Derek Bate

A A simple batch file will do the trick in Windows 9x/Me, but because it makes use of DOS, the same technique won't work in Windows XP. I'll describe the process in Windows 9x/Me and then show you how to achieve the same result in Windows XP with the help of a freeware utility called WINX32, which also works on other versions of Windows.

In Windows 9x, you create a batch file which contains commands to run each program. A batch file is simply a list of DOS commands to be run sequentially. In our example, we'll run Notepad and Internet Explorer from a single icon. You'll be able to use the same technique to run Cheating Death and Counter-strike or any other programs you choose. Even if you're using Windows XP, go ahead and create the batch file as described below, because you'll use a modified version of it in conjunction with WINX32.

1. Before you create your batch file, you need to discover the full pathname used to run each program. There are two ways to do this:
 - a. If you have a shortcut to the program on your desktop, in the Start menu or in the Quick Launch bar, right-click the program's shortcut and select Properties from the pop-up menu, click the Shortcut tab, then note the contents of the Target field (including quotation marks). For example, if you have a shortcut to Internet Explorer on your desktop, check its shortcut properties and you're likely to find "C:\Program Files\Internet Explorer\iexplore.exe" in the Target box.
 - b. If you don't have a shortcut to the program, locate

the actual program file (most are stored either in a subfolder of the \Program Files folder or, in the case of Windows' built-in apps, in the Windows, Windows\System or Windows\System32 folders; use the Find or Search command to help if you need help locating a program). Once you find the program, you can construct its full pathname by noting the name of the folder in which it resides, followed by a backslash and the program file's name. For example, if you look for Notepad, you'll (usually) find it in the C:\Windows folder. The Notepad program file is called notepad.exe, so the full pathname is C:\Windows\notepad.exe.

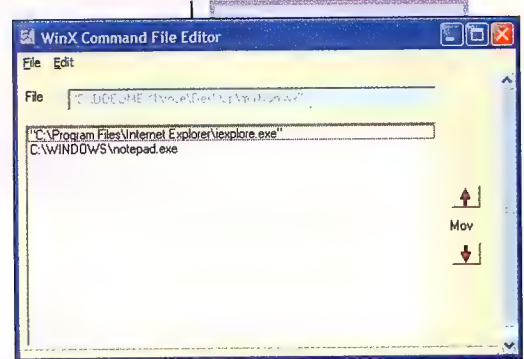
Even though this filename is not enclosed in quotes, add quotes to it when you create your batch file both for consistency and because any pathname which includes spaces will confuse DOS unless it's enclosed in quotes.

2. Once you have the full pathname of each program you wish to run, you're ready to create your batch file. Right-click in a blank spot on the desktop and click New → Text Document from the pop-up menu.
3. Name the new document multirun.bat and when asked if you're sure you want to change the file's extension, click Yes. Note that you can name your batch file anything you like, provided the filename (the part before the full stop) is eight characters or less, and you keep the extension BAT.
4. Right-click multirun.bat and select Edit from the pop-up menu. This opens the file in Notepad.
5. Type the first program's full pathname on a single line (enclosed in quotes), press Enter, then put the second program's pathname on the next line. If you wish to launch other programs, add their paths on separate lines.
6. After the final program pathname, type **exit** on a line by itself and then close and save your batch file. In our example, the batch file should look like this:

```
"C:\Program Files\Internet Explorer\iexplore.exe"
"C:\Windows\notepad.exe"
exit
```
7. To run the two programs, double-click multirun.bat. That's it.

If you try to run this batch file in Windows XP, you'll find the first program loads but the second won't load until you exit from the first. There are a number of ways around this problem, but the most elegant is to use WINX32, which we have included on this month's cover discs.

1. Once you've unzipped WINX32, install it by double-clicking Install.bat.
2. Right-click the multirun.bat file you created earlier, select Edit from the pop-up menu, delete the line containing the word **exit**, then close and save the file.
3. Right-click multirun.bat, select Rename from the pop-up menu, and change its name to multirun.wx.
4. Double-click multirun.wx to launch the programs. >>>



This unpreprocessing program makes it easier to run any number of applications with a single click.

NETWORKING Q&A

Network via modem

Q Is it possible to connect two PCs by using their modems? Each PC has an internal 56Kbps modem. One runs Windows 98 while the other runs Windows XP Home Edition.

— Blair Beckers

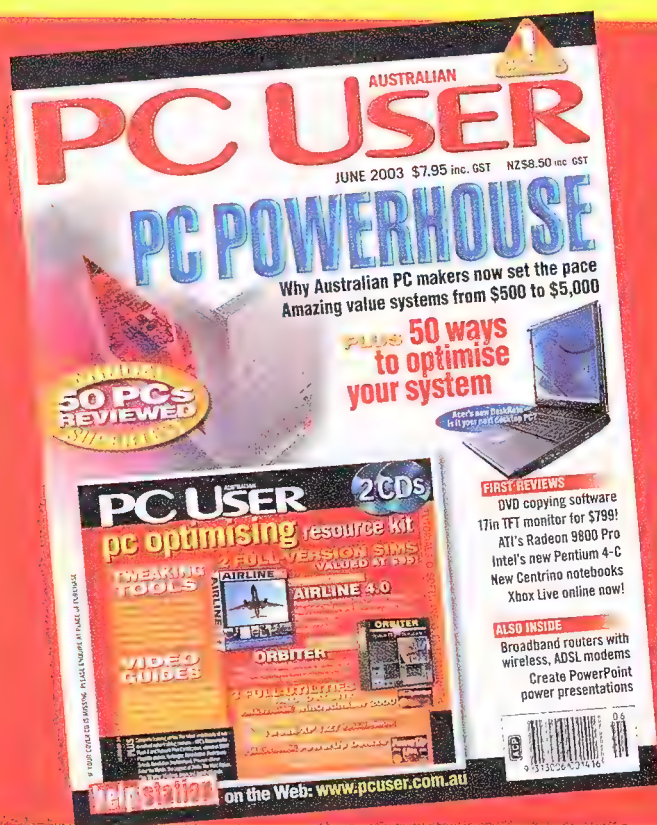
A It is indeed possible. In fact, that's how some people network their PCs over long distances, such as on a rural property. You have to play with the settings, such as not requiring a ring, but it can be done.

The question I have to ask is why would you want to? It's much faster to connect via a direct-connect cable (parallel, serial or USB, for example). And two 100Mbps network cards and 100 metres of crossover cable can be had for about \$100.

— Paul Zucker

SUBSCRIBE FOR YOUR A FUJITSU STYLIS

For this month only all new and renewing subscribers will get the chance to win this fantastic **Stylistic from Fujitsu PC**.



Subscribe to Australia's No.1 technology magazine

Winner of this year's
Sun Microsystems IT Journo Awards
for 'Best Technology Title' and
'Best PC or Consumer Technology Title'.

Each month you'll receive:

- ❖ Tips and tricks for using Windows, applications, upgrading hardware and much more.
- ❖ Reviews of the hottest new technology products and practical buying advice.
- ❖ Two CDs packed with great software, games, interactive tutorials and more.

Save over \$22 by subscribing today

Get 12 issues of Australia's No.1 technology magazine delivered to your door for only \$73

3

**WAYS TO
SUBSCRIBE
AND SAVE**

❖ Call 13 61 16

❖ Visit www.magshop.com.au

❖ Mail the coupon

CHANCE TO WIN STYLISTIC ST4110 TABLET PC



Designed for truly mobile professionals, the **Stylistic ST4110** is a slim and lightweight tablet PC with superb wireless connectivity.

PRIZE
VALUED AT
\$4,399

You can take handwritten notes, prepare documents, check emails or prepare drafts by hand anywhere, anytime. The Stylistic extends the Fujitsu PC mobile computing range with its uncompromising performance and flexibility.

THE POSSIBILITIES ARE INFINITE

FUJITSU

L I F E B O O K

Made in Japan. World Class.

Authorised under NSW Permit No TPL03/04417
SA: T03/1740 ACT: TP03/1814 NT: NT03/1593

Please see Contents page for the location of
the Privacy Notice and Terms and Conditions.



A few things to note:

- In Windows 2000 and XP, the Target field for a file may include the word %systemroot%. This refers to the folder where Windows resides. You must replace this value with the actual folder path of Windows. For example, if the target for Microsoft Paint is given as %SystemRoot%\System32\mspaint.exe and Windows is installed in the C:\Windows folder, you'll need to adjust the command in your batch file to read "C:\Windows\System32\mspaint.exe".
- The WX extension not only associates the file with WINX32, it also adds a special Winxedit command to its right-click menu, allowing you to edit it using a special editor. Check it out.
- Take the time to read the winx32.txt file. You can get a lot of control over your programs using some of WINX32's options described in this file.

— Rose Vines

System Restore on dual boot

Q I have a dual-boot system with Windows 98 Second Edition and XP Pro. Will the System Restore in XP protect Windows 98 in the event of a malfunction or system crash? The System Restore in XP tells me 98 is monitored and gives the option of not monitoring Windows 98 or my data partition. Before I installed XP, I was using Roxio GoBack to protect Windows 98. I've disabled it on the 98 system because there's a conflict with XP System Restore. Which is the best System Restore utility to use?

— John Brazier

A Yes, Automatic System Recovery (ASR) will protect the Windows 98 partition. It's important to do the recovery from within Windows XP, as a recovery from within Windows 98 might disable XP. As to the best utility to use, I have not tried any personally. I am not aware of any reason to substitute anything for the internal Windows management — and you have mentioned yourself the reason against: possible compatibility problems.

— Jan Wikström

Deleting desktop icons

Q I have some icons that clutter my desktop display, but represent essential data files for some applications. I would like to remove these icons from my desktop without removing the corresponding file. Is this possible. If so, how?

— John McNeely

A If the data files on your desktop are part of an application, that means you've installed the application to your desktop folder — not a good idea. I suggest uninstalling the application (using Control Panel → Add/Remove Programs) and then reinstalling it to a different folder, preferably a subfolder of the Program Files folder. Make sure you back up any program data before you do this, and that you have a setup CD (or original downloaded setup file) for the application.

- If the data files are simply documents you have created using an application, you can safely move

them elsewhere. I also suggest you check where your application is saving files by default; if it is the desktop, try changing the default Save folder. For example, Microsoft Word allows you to choose a default location for saving files (Tools → Options → File Locations), as do many other applications.

- As a general rule for deleting items on the desktop: if an icon is a shortcut to a file (either a program or a data file), you can delete it without affecting the original file. A shortcut is merely a pointer to a file, not the file itself, so you can delete it, rename it, copy it and so on without having any effect on the original. You can usually recognise shortcut icons because they have a little arrow in the bottom left corner.

If you have a bunch of shortcuts to files on your desktop and want to eliminate the clutter, I suggest you create a folder — preferably somewhere in My Documents — and move all the desktop files into that folder. If you want to access those items easily, create a desktop shortcut to the folder. That way, you have only a single desktop icon giving you access to all the files.

To create the desktop shortcut, let's assume you've stored all the files in a folder called My Documents\Former Desktop Files.

1. Open the My Documents folder and resize it so you can still see some of the desktop.
2. Right-click and drag the Important Docs folder onto the desktop. When you release the mouse button, select Create Shortcut Here from the pop-up menu.

Now you'll have a shortcut to the Important Docs folder on your desktop; opening it will give you access to all your files. You can delete this shortcut at any time without affecting the folder or its contents.

— Rose Vines

Deleting read-only files

Q I would like to know how to delete read-only files.

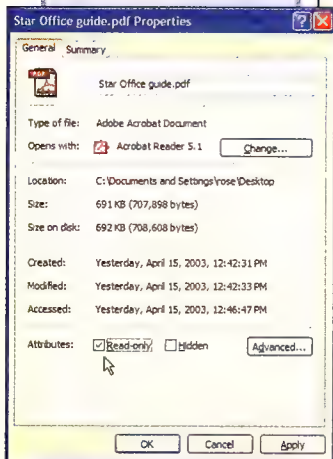
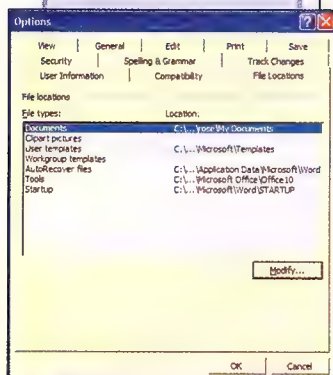
— Liam McGill

A I assume that you are referring to deleting files on a CD, and not on your hard drive. As you've made your question so open ended, I'll answer both questions.

- To delete read-only files on your hard disk (or anywhere else, for that matter) you must remove the Read-only attribute. To do that, right-click the file and select Properties from the pop-up menu. In the Attributes section, click to remove the tick beside Read-only, then click OK. The file may now be deleted.
- Deleting files on a CD is possible under certain circumstances, but not under others — it all depends on the type of CD. If you're using CD-RW discs, you can erase files by reformatting the disc or, if you use packet writing software such as DirectCD, you can treat files on the CD as if they were on any other type of disk, and delete them in the usual manner. If you're using CD-R discs, you can't delete the files. CD-R is WORM (write once, read many) technology, which means once you write a file to the disc, that's it.

— Rose Vines

Many applications let you choose a default save folder for your documents.



To delete a read-only file, remove its Read-only attribute.

Optical drive failures

Q My computer seems to have an appetite for optical drives. While still under warranty, the original Mitsubishi 52x drive was sent back twice for repair then finally replaced with an LG which won't read any CDs at all, even though it is brand new. The burner I bought after about 12 months has recently died (just out of warranty — it still reads CDs on and off, but refuses to burn them). And now it seems my DVD-ROM is on the blink, working only intermittently. Sometimes it won't read a CD in the drive (I put the CD in and am still prompted to insert a CD), and sometimes the drive disappears from my computer altogether. Is this a problem with the drives or the motherboard? All help is greatly appreciated as I am thinking of upgrading my system and would like to know where I am going wrong.

— Brenton Light

A It's quite possible you've had a bad run of luck on your drives. We've had all sorts of problems with CD burners over the years, but the reliability of the drives seems better on the newer models.

Optical drives tend to have a much shorter life span than hard disks. The average mean time between failures (MTBF) for optical drives is much lower than for hard disks (unless you purchase an industrial model designed for high-capacity writing tasks). That's why most optical drive manufacturers provide a one-year warranty, while many hard disk manufacturers are happy to provide a three-year warranty.

So, while you should get more than a year's worth of work out of your drives, it's not abnormal for them to fail 'just out of warranty'. And, if your drives are heavily used, you can expect the end to come sooner.

Other factors which may be at play include the quality and cleanness of the media you use; the possibility of the drive controller on your motherboard being faulty; your software settings (if you're always trying to write at maximum speed, you may end up with loads of dud discs).

Here are some possible physical causes for failure:

- Something unusual in the way you have your drives arranged. This would presumably cause problems from the start, not after a while. Perhaps you could consider getting a separate IDE controller card for your optical drives. Certainly, try a new IDE cable. Consider these arrangements and settings:
 - IDE channel arrangement
 - jumpers on the drives
 - faulty IDE controller
 - DMA settings
 - an unusual setting in the BIOS
 - bad IDE cable
- Something out of spec on your PC. It's highly unlikely, but you might have a problem such as one of the power supply voltages being too high. You could borrow a multimeter and check the voltages at the drive as it's running. Do this by measuring at a connector that obviously branches off the same power line.
- Physical contamination. Are you in a particularly dirty/dusty environment or somewhere where there are solvents or similar? Have you tried using a CD cleaning disc to clean the laser optics?

- Are you using house paint or a Dremel engraver to label your discs? Once again, as silly as it seems, some people put great, fat, sticky labels on one edge of the disc. On modern CD drives, which spin at amazing speeds, these out-of-balance discs can set up a tremendous wobble in the system, eventually causing the optics to go out of alignment, or the bearings to get worn. We've also seen CDs with holes drilled near the rim 'so I can hang them off a nail'.

- External vibration. Optical drives rely on an accurate alignment of the laser optics — not only for position, but also for focus. It's possible, in a PC that is subject to a lot of bumping or vibration, drives might go out of alignment.

— Rose Vines & Paul Zucker

Scanner and printer via switch box

Q I have an Avision 260c scanner and a Canon LBP 660 printer. Both lived in harmony in series until I installed XP. Now I require a switch box. Why?

— Steve Cochrane

A No wonder you're having problems. Your scanner is not compatible with Windows XP and nor is that model of Canon printer. You're lucky they're working at all. I suggest for a start you update your Canon LBP 660 driver to the Windows 2000 version, available at the Canon Web site (www.canon.com.au) if you're currently using a Windows 9x driver. It should provide better performance on Windows XP. The Avision scanner doesn't even have a Windows 2000 driver.

It always pays to check out the Windows Hardware Compatibility List at www.microsoft.com/hwdq/hcl/search.asp before upgrading your operating system. While Windows XP provides much broader hardware support than Windows 2000, there are plenty of devices that aren't supported. Sometimes they will work using old drivers; sometimes they won't work at all. Getting your scanner and printer to run off a switch box is probably about the best you can do, unless you opt to sell your old hardware and get >>>

NETWORKING Q&A

Ping problems

Q I'm trying to set up a home network between my new P4 computer using Windows XP Home and a Celeron 333 using Windows 2000 (with Service Pack 1). I've set up static IP addresses 192.168.10.1 (XP) and 192.168.10.2 (2k) with a subnet mask of 255.255.255.0. The workgroup is called HOME and the computer names are PENTIUM_4 and Celeron. NetBIOS has been enabled over TCP/IP. Both computers show the 'Connected @ 100MBs' icon in the system tray. When I ping Celeron from PENTIUM_4 I get a good result, but the ping times out when pinging from the Celeron to the P4. The drives have been shared. When I look in Computers Near Me there is nothing there, and when I try to view other computers on the workgroup in XP, it says it can't connect to the HOME network group. Can you help?

— Craig Adams

A The 'Connected @ 100MBs' in the system tray indicates that Windows can detect a connection from your network interface card (NIC) to the hub or switch, or other NIC. It does not indicate the health or otherwise of the setup, apart from the cabling and NIC drivers probably being OK. Your IP addressing and workgroup naming looks OK. Since you can ping from one computer to the other, it implies the paths in both directions can carry traffic at IP level. This means the problem is likely to be higher in the setup.

Do you have a firewall such as ZoneAlarm set up? Does it see the network card as Internet or Trusted? If the network card on the target of a ping is set as Internet, the firewall will block the ping. It may affect the ability to see the workgroup, but normally you would be able to see the local computer. Try setting it as Trusted. The firewall should still see packets to or from public (Internet) IP addresses and check on them in the usual way.

You may also need to try disabling your firewall software to get things running to start with. If you have XP's built-in firewall enabled, try disabling it.

1. Right-click My Network Places and select Properties from the pop-up menu.
2. Right-click Local Area Connection and select Properties.
3. Click the Advanced tab.
4. Remove the tick in the Internet Connection Firewall section.
5. Now try pinging.

Also check if you have any antivirus software in autoprotect mode. This is a vital part of your security, but you may want to experiment with its settings and see if they have any effect.

— John Hepworth

INTERNET Q&A

Anonymous email

Q I have heard about emails being sent anonymously in order to avoid a trail from the sender. Fact or fantasy? — Karl Woodhead

A Sending an anonymous email is easy. Ethical, moral and/or legal? That's another story and depends on the purpose of being anonymous. Using an anonymous address when a Web site demands an email address before providing access is a good way to minimise future spam — and generally considered acceptable. Using an anonymous address to send out spam, porn, or any other illegal material is unethical, immoral, illegal, or all of the above. Yes, it's easy to change the From address in your email client. But when the email is received, the header will show the trail it took from mail server to mail server from you to recipient. It's then easy for an investigator with access to your ISP records (a subpoena might be required) to trace it back to you. There are anonymous email servers (type anonymous email in a search engine to find them) and Web email services. Many of these do not demand any identification from new users, so it's quite easy to set up an anonymous account.

— John Hepworth



new USB versions. USB hardware gives you better performance and is easier to configure. Check that hardware compatibility list before you make your purchase.

— Rose Vines

How much electricity?

Q How much power does a desktop computer consume while downloading all night? — Rob Horton

A A standard monitor consumes about twice as much as a PC. A PC consumes about 130W when it's just idling, such as downloading a file, so if it's running for eight hours, it will use about 1 kilowatt-hour (kW-hour) of power, or about 10 cents worth.

— Paul Zucker

BIOS optimisations

Q How does one know which settings in the BIOS should be turned on or off to optimise performance? The motherboard manual seldom gives an explanation of what each setting does.

— C Neo

A You're right. Motherboard manuals are not usually very forthcoming on BIOS settings. A better source of information is the company that manufactures the BIOS.

Phoenix, which makes both the Phoenix and Award BIOSes, has downloadable documentation for all its BIOS chipsets at www.phoenix.com/en/customer+services/white+papers-specs/product+documentation/phoenix_award_bios.htm. Scroll to the bottom of that page to find some generic BIOS manuals.

American Megatrends (AMIBIOS) has a fabulous Document Library at www.ami.com/support/product.cfm, which includes manuals, installation guides, beep codes and a whole lot more.

One of the difficulties in talking about RAM optimisation is that the available settings differ from BIOS to BIOS (including between different models from the same manufacturer), and the way those settings work on your computer depends on the rest of your system's configuration. For example, enabling the Read Around Write setting on one machine may boost performance, whereas on another it may have no impact.

Probably the best source of generic information about BIOS settings is The Definitive BIOS Optimization Guide at www.adriansrojakpot.com/

[Speed_Demonz/BIOS_Guide/BIOS_Guide_Index.htm](#). This guide may not include all the options available in your particular BIOS, but it covers many common features.

A few words of warning:

- Messing with your BIOS settings can render your system unbootable, so take great care.
- Don't fiddle with a setting you know nothing about.
- Before you make any changes, note the original value so you can change your system back to that value if things go wrong.
- Don't change more than one setting at a time — that's inviting trouble. Change a single setting, save it, reboot your system and spend some time working with the new setting. If it doesn't cause problems and seems to improve performance, then try adjusting the next setting, repeating the same procedure. If you change a setting and you can't get into Windows or your system becomes unstable, reboot, enter the BIOS and change the setting back.

— Rose Vines

Too much RAM for Windows Me

Q I have a memory problem. After playing a couple of games, Windows Me locks up and I have to reboot. I have 780M RAM. I have had this problem since I upgraded my RAM from 256M and the video card from a GeForce2 to a Ti4200 GeForce4.

— Anton Smith

A There are known problems with Windows Me (and all earlier versions of Windows) running more than 512M RAM. What happens is Windows' protected mode cache driver (Vcache) can consume all the addresses in the system area, leaving no virtual addresses for other functions. If this is what's happening to you, usually you'll get either a 'not enough memory' message, or an 'insufficient memory to initialize Windows' message. Even if you're not getting such messages, it's likely this is the problem.

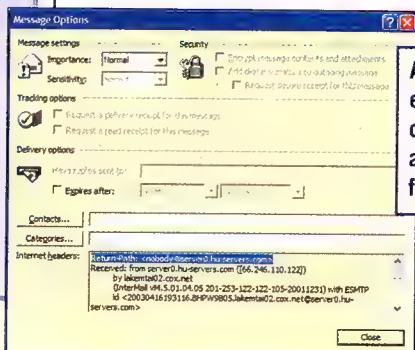
The suggested workaround is to reduce the size of the MaxFileCache setting, which effectively limits the size of Vcache. You'll find information on how to do this in Microsoft Knowledge Base article 253912 (<http://support.microsoft.com/?kbid=253912>).

Another alternative is to reduce your installed RAM to 512M, or preferably to 256M. Windows Me functions quite happily on 256M, but this may not be a very palatable option.

A better option, although a little expensive, is to upgrade to Windows XP, which will lap up huge quantities of RAM and actually provide performance enhancements to justify your RAM expenditure.

Of course, changing two items of hardware at the same time is an invitation to troubleshooting headaches, and high-performance video cards often cause problems. If your problems persist after limiting MaxFileCache, first check you have the latest drivers for your new card. If updating your drivers doesn't help and if you still have your old video card, try swapping the two (being careful to uninstall current drivers and install the old ones) and see if that solves things. If not, consider reducing your RAM or upgrading your operating system.

— Rose Vines **PCU**



Anonymous email services can keep your address hidden from others.

Broadband SUPERGUIDE

98 ISPs and 264 plans detailed

Seven steps to a killer broadband deal



PLUS

■ Expert reviews

"Barebones" mini PCs

Affordable DVD burners

Red Hat 9.0 vs Mandrake 9.1

■ Superchip shootout

Fastest chips from
AMD and Intel

■ Massive PC gear giveaway

\$15,000 worth of
hardware and software

6

FULL WORKING PROGRAMS



worth over \$1,700 on APC's cover CDs

www.apcmag.com

OUT NOW

SOFTWARE MEGA GUIDE

We review small business software for every need, and provide tips on buying.

A solution for every business

As with other software markets, business software is also usually dominated by one or two players in each category. Quicken and MYOB are clearly the favourite accounting packages among small businesses. Microsoft Project is the major player in project management, as is ACT! for customer relationship management.

However, with businesses, even more so than home users, it's important that you don't blindly follow the pack. Choosing the wrong software will almost certainly impact on your bottom line. Equally, choosing the right software for your needs could make all the difference to the success of your business.

In this feature, we examine the market leaders in the major business software categories, offer some alternatives, and reveal when you should stick with the strength and when you should consider an alternative. First, however, here's a quick guide to choosing the right software for your business.

Before you shop for a solution

Your first step is to look at your business critically and identify procedures and practices that need improvement. Then consider areas of potential growth for your business — make a list.

Now educate yourself about what software applications are available and what they can do. But before you pull out the cheque book, take the time to think about how those applications could be applied to your business. How can they improve procedures or help your business' growth? Again, make a list. Then talk to as many people as possible, from staff who will be using the software, to your accountant and other small business operators.

The idea is to marry the two lists together, discarding software that you don't need and to detail what you want from those applications that you do need.

Now you'll be ready to go shopping for solutions, not just software. However, there are a host of other factors that you need to consider before making your final purchase.

- **Hardware and operating system.** Are your computers capable of running the software? Remember that minimum system requirements are just that — the bare minimum. And make sure your operating system supports the software. Of course, you can always upgrade the OS and hardware, though you need to make sure there will be a return on that extra investment.
- **Training, installation and support.** How much will it cost to train you and staff? In many cases, self-training just doesn't work — you can waste days or weeks in productivity. Is the software widely used and taught? This will help reduce ongoing training costs for future employees. Don't forget the cost of installation. Even if you do it yourself, there's the cost of your lost productivity and that of your business. It's vital that prompt technical support is available when you want it. Check carefully how much this costs, the hours available, Web resources and other details.
- **Room to grow.** For example, if you're buying single-user accounting software, can it be upgraded to multiuser if your business expands and you employ another accounts clerk?
- **Customisation.** Some software won't fit your exact needs but it may be able to be customised to suit. In particular, if the software uses a popular scripting language like Microsoft's VBA, a programmer may be able to write a program to do some tasks the software can't do straight out of the box.

There are other important factors, too, such as the reliability of the vendor, ease of use of the software and compatibility. Not so important is the up-front price. Extra training and support costs will quickly blow away the initial cost saving of buying a cheap and nasty program.

On the other hand, a low price is certainly not always indicative of an inferior product. For example, Microsoft Works Suite is a fraction of the price of Microsoft Office, yet it includes the full version of Word and could be everything you need.

Finally, make sure you fully cost everything you will need, including training, hardware upgrades, support and installation. Only then can you assess whether productivity or revenue increases will result in a return on investment.

SHARING YOUR DATA

Before buying any software, make sure it will allow you to share data with your consultants, clients and suppliers, if needed. This may be vital, for instance, if you use an accounting firm to handle your GST and tax returns. Also check whether the software will integrate with the software you already have. For example, can the customer information in your accounting software be accessed by your new CRM software?



SMALL BUSINESS ACCOUNTING

MYOB Accounting Plus 13 and Premier 7

RATING **Price:** Accounting, \$349; Accounting Plus, \$595; Premier, \$1,495 **Contact:** MYOB **Phone:** 1300 555 151 **Web:** www.myob.com.au

At its most simple, accounting software helps manage the finances of a business by allowing you to record transactions such as payments received and made. It also produces reports that list these payments and summarise them for analysis. As the recording and reporting needs of businesses vary, so do the tools provided by accounting software.

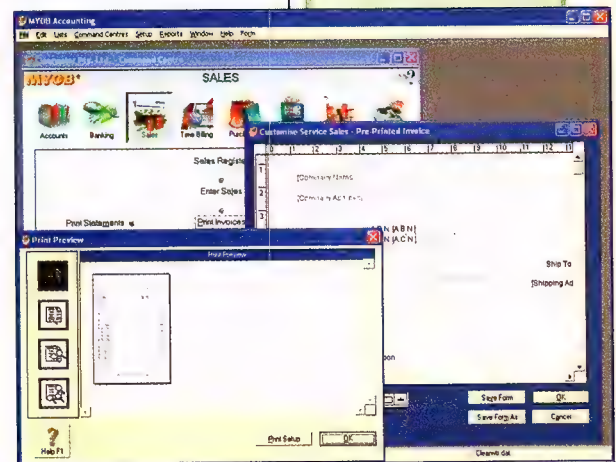
Typical features include multiuser and multicurrency options, integrated payroll and inventory, time recording and billing, and other options such as warehouse management, manufacturing and online stores. The leading solutions in this genre are MYOB Accounting and Quicken QuickBooks, in their various versions.

MYOB has a range of features to suit the small to medium business and can be run in multiuser mode. There is an upgrade path available so the software can grow with the business. MYOB products are customised for Australian needs and will track GST, and you can purchase an add-on tool to enable credit card, POSTbillpay and BPay payment for invoices. Some products in the suite also include integrated payroll and inventory solutions, offering all the features that most businesses would need.

Why you'd choose another product. When the needs of your business change, MYOB may no longer offer what you require. Where greater inventory control is required, Pastel offers better control than MYOB.

There is also an optimum number of concurrent users that MYOB supports and when exceeded, circumstances might dictate a move to a more robust multiuser solution. In addition, where specialist tools are required to support manufacturing, warehousing, online sales and so on, it may make more sense to opt for a solution where you can purchase additional specialist modules that integrate seamlessly with the basic accounting software.

Why you'd keep using it. Like QuickBooks, there are multiple versions of the MYOB suite, so when your business grows, you can move to a more feature-rich tool without losing your transaction history, and without having to re-key any data.



Quicken QuickBooks 2003

RATING **Price:** Lite, \$229; Small Business, \$499; Plus, \$679; Pro, \$1,495 **Contact:** Quicken **Phone:** 1300 784 253 **Web:** www.quicken.com.au

QuickBooks comes in a range of versions from Lite through to a specialist version for accountants, and sports a slick, browser-like interface. The top of the range for most businesses would be QuickBooks Pro, which adds multiuser capabilities and some additional features to the Plus version, such as emailing invoices and integration with Excel, Word, Outlook and Act!.

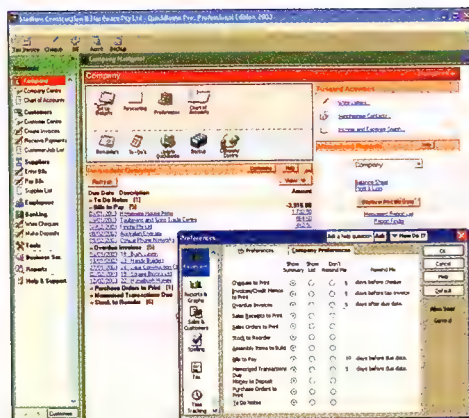
The Pro version also allows you to create and share customised report templates with other QuickBooks users, and improved form customisation.

QuickBooks can handle up to 20 price levels for stock items, which you can

name yourself for easy identification. Both Plus and Pro versions offer integrated payroll, so both finances and payroll are managed from the one interface and linked automatically. The Lite version is the entry-level version (no inventory), which is designed to be easy to set up and a good starting point for small businesses that need more than a cashbook tool.

Why you'd choose another product. Like MYOB, you'd move away from QuickBooks if your business was growing too big for the software, or where the business requires specialist features that aren't available in this type of 'one size fits all' solution.

Why you'd keep using it. As with MYOB, there's plenty of room to grow in the QuickBooks range, and upgrading within the range avoids any potential problems with transferring your data from one format to another. >>>

WE
RECOMMEND

While Quicken QuickBooks Small Business/Plus/Pro and MYOB Accounting Plus/Premier lead the market, your choice should depend on the best match for the specific needs of your business, which may include integration with whatever package your accountant uses. For inventory management, Pastel is still a winner, and at a more basic level Simply Accounting represents good value.

SOFTWARE
MEGA GUIDETRY THIS
FREEBIE

E-Record 2.0.2

www.ato.gov.au/level3.asp?placement=AS/BS/OB/OB15

The Australian Taxation Office offers its own E-Record software, which is free to download. It's just a simple record-keeping and invoicing tool, but it might suit a very small business.

ACCPAC Simply Accounting 2003

RATING **Price:** Basic, \$110; Pro (one user), \$209; Pro (five users), \$517 **Contact:** ACCPAC **Phone:** 1800 222 040 **Web:** www.simplyaccounting.com/aus

Simply Accounting 2003 isn't quite in the same league as MYOB or QuickBooks, but neither is its price. It's a handy program with plenty of features and a simple interface. The multiuser version includes multiple levels of security for each user and each module — a feature reminiscent of more costly solutions. Pro can also manage multiple departments within an organisation, allowing you to allocate expenses and receipts to these, and get quite detailed reports.

Pro is available in a single or multiuser version, and includes time recording and billing, bill of materials and the ability to store 100 years of data. Both Basic and Pro versions offer a new Web store option that integrates with the software. For new users, there are business templates you can use to quick start your setup, and you can create your own reports to augment those shipped with the program.

MYOB BusinessBasics

RATING **Price:** \$199 **Contact:** MYOB **Phone:** 1300 555 151 **Web:** www.myob.com.au

MYOB's BusinessBasics is an entry-level accounting software solution for small and home businesses. It looks more professional than Quicken CashBook because it is true business software, not a mix of business and personal. Consequently, it has a narrower, more focused feature set. BusinessBasics allows you to create quotes you can convert to invoices when a sale is made.

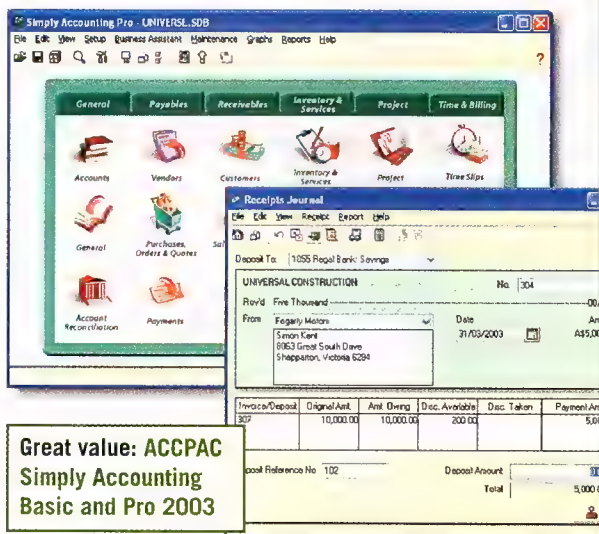
It has no inventory and only rudimentary security options, so it's best suited to a small business (in particular, a service business), where inventory management isn't required and the owner keeps the books. However, the program could easily manage the needs of a small company and it can produce end-of-year financial statements. Handy tools include the ability to email quotes, invoices and reports, and a

'for fee' add-on, to add credit card, BPay, and POSTbillpay options to your invoices.

Pastel Xpress and Accounting 6

RATING **Price:** Pastel Xpress Entry, from \$306.90; Pastel 6, from \$1,094.50 **Contact:** Pastel Software **Phone:** 1800 024 851 **Web:** www.pastel.com.au

Pastel has two products aimed at small to medium



Great value: ACCPAC Simply Accounting Basic and Pro 2003

businesses. Its entry-level solution is Pastel Accounting Xpress, which is based on Pastel Accounting 6, so the two look very similar. There is a clear upgrade path from Xpress to Accounting 6 and you won't lose your data in the transition.

Xpress includes the basics tools for transaction recording and is GST ready. It has the ability to manage customers and suppliers, and supports up to three users, which is unusual for this class of software (Accounting 6 supports up to 20). It also offers inventory, quotes and purchase orders.

Accounting 6 adds to the Xpress options by allowing user-defined fields in the database, for example, for describing inventory items, and it allows you to add modules such as point of sale, manufacturing, multicurrency, bill of materials, multistore and so on. Pastel documents such as purchase orders, invoices, statements and reports can be emailed or created as HTML documents, as well as being printed. Pastel's add-on specialist modules make this the software of choice for many businesses.

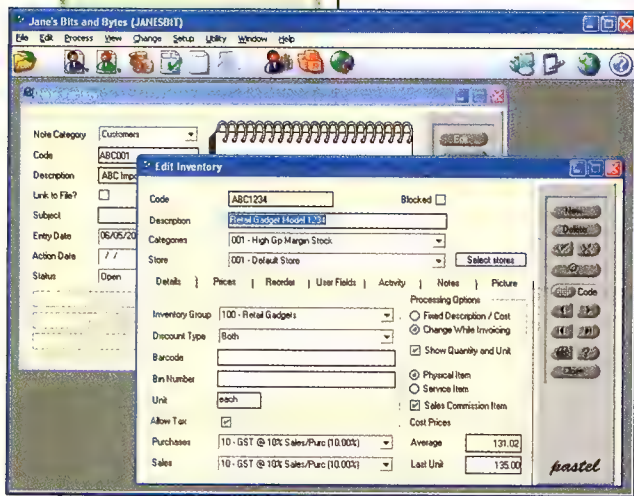
Quicken CashBook 2003

RATING **Price:** \$399 **Contact:** Quicken **Phone:** 1300 784 253 **Web:** www.quicken.com.au

Quicken CashBook is a simple cashbook (single-entry) program that bridges the gap between home and small business accounting software, and has a foot in each camp. Alongside the business-like job tracking and invoicing features are a debt reduction and savings planner, and an investment portfolio tool. This program would suit an owner-operated small or home business that doesn't have inventory needs (there is no inventory feature) but requires a simple way to record invoices and manage basic bookkeeping and GST requirements.

CashBook runs from a simple register-like interface, reminiscent of Quicken Personal products, and transactions are easy to alter if a mistake is made — a good thing if you're an owner operator, but undesirable if someone else does the books for you. It offers some integration with Outlook and it can download bank statements from your bank's Web site. — Helen Bradley **PCU**

Strong on inventory management: Pastel Xpress and Accounting 6





Hot off the web

Australia's most respected news and current affairs magazine breaks stories and helps set the national agenda. Few titles have such a power to influence - even on-line.

With broad web coverage of politics, business, the arts, sport, health, and social issues, *The Bulletin* is essential for keeping abreast of developments in Australia and around the world every week.

Subscribe NOW!

The Bulletin
Newsweek

www.ninemsn.com.au/bulletin

SOFTWARE MEGA GUIDE

WE RECOMMEND

Gone are the days when managing your finances was as simple as getting down to the bank to cash your pay cheque. A personal finance package is an essential addition to your PC and Quicken Personal is as far as you need look for the perfect tool to manage your money.

PERSONAL FINANCE AND INVESTMENT

Quicken Personal 2002 SE

RATING **9** **Price:** \$79.95 **Contact:** Quicken **Phone:** 1300 784 253 **Web:** www.quicken.com.au

Ever looked at your credit card statement and wondered how the balance ever got to be so impossibly high? Or has your mortgage balance stalled and you have no idea how many years it's going to be before you even come close to owning more of your house than the bank does?

Personal finance packages are the key to unlocking the mysteries of where your money goes. If you know you're a hopeless money manager, you should check out these packages.

Quicken Personal is packed with tools aimed at helping you balance your finances. The Quicken brand is synonymous with financial management software, and Quicken Personal is where it all begins.

Quicken Personal manages all of your day-to-day accounts, and you'll quickly become familiar with its user-friendly interface. The reporting tool is fantastic, offering 'drill-down' facilities to take you from summary reports into more and more detail. The real key to Quicken reports are the simple overviews, using graphical representations to help you understand exactly where all that money goes, and analysing your spending habits.

The latest version of the software also offers import facilities that streamline data entry and

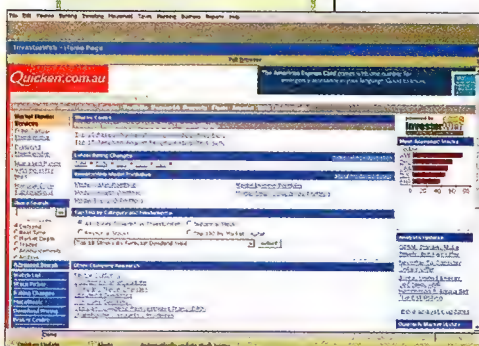
reconciliation processes. This cuts down the transaction entry time considerably and helps simplify the process of reconciling your accounts.

For an extra \$40, you can get Personal Plus, which incorporates a financial address book and home inventory package. These are excellent tools, in particular home inventory. It helps you accurately set the level of contents insurance, and stores vital information about your assets, which you can use if an insurance claim is ever necessary.

Budding business entrepreneurs would be pleased to note that Quicken Personal is the first step in a range of Quicken software catering for business needs, including handling GST issues. You can migrate your accounts easily from Quicken Personal if you outgrow its capabilities.

Why you'd choose another product. While Quicken Personal manages to tackle most of your financial issues, in some ways the interface and myriad of options can lose you. Money provides a few better tools in file setup and a little more simplicity in getting to the basic output, which would assist you when getting started.

Why you'd keep using it. At the heart of Quicken is a set of transaction registers to maintain every one of your accounts from savings to credit cards, loans to investments. Everything you own and owe can be tracked, giving a complete overview of your financial situation. This approach makes it easy to get up and running fast, by allowing you to only focus on the accounts you need to keep track of, and you can add further accounts down the track.



Microsoft Money highlights all your financial data in handy summary reports.

Microsoft Money 2003 Standard

RATING **8** **Price:** \$79.95 **Contact:** Microsoft **Phone:** 13 20 58 **Web:** www.microsoft.com.au

For as long as Quicken Personal has been on the scene, Microsoft has provided an alternative personal finance package, Money. The latest versions have almost identical features.

The two products have a similar approach, but the Money interface is much harder to follow. In particular, the nature of the transaction entry screen makes it difficult to see many transactions at once, and the screen is overloaded with information, making it difficult to just get the job done.

Money also shows a lack of customisation for Australia. While

some of the online finance services take you to ninemsn, the Online Investing Research assumes that you're investing in the US (just add AU to the front of your stocks if you want Australian research).

Quicken ShareAnalyser

RATING **8** **Price:** \$199.95 **Contact:** Quicken **Phone:** 1300 784 253 **Web:** www.quicken.com.au

Once you're ready to spread your wings in the world of share market investing, take a look at ShareAnalyser. Full of the tricks that professional share traders use to build their wealth, ShareAnalyser provides sophisticated market watching and research tools in a user-friendly and cost-effective package.

Including 20 years of historical data and subscriber access to daily downloads of market information, ShareAnalyser will help keep you informed about the markets and make those buy or sell decisions much easier.

— Kurt Best **PCU**





Simply Accounting makes Managing Your Own Business easier!

FROM ONLY \$110!

Simply Accounting 2003 Seminar

We invite you to a **FREE** catered seminar to learn about the exciting features, new and old, in Simply Accounting 2003

Melbourne

Monday June 23rd

Sydney

Wednesday June 25th

Adelaide

Friday June 27th

Brisbane

Thursday July 3rd

Perth

Tuesday July 8th

Auckland

Friday July 11th

To register and for further
information please visit:

www.simplyaccounting.com/aus

You didn't start your business to become a bookkeeper...

That's why we made **Simply Accounting** with all the comprehensive tools you need to run your business. From General Ledger, Customers and Sales, Vendors and Purchases to Inventory, Project Costing and even an integrated Webstore. Features also offered include Departmental Accounting, Time & Billing, Multicurrency Support, Bill of Materials Functionality and Multiuser Access. And you can get started in minutes with our user-friendly Installation Wizard and over 100 industry templates to match the needs of your business.

Please join us at one of our **FREE** seminars to discover how easy Simply Accounting is to use.

Simply

ACCOUNTING 2003™

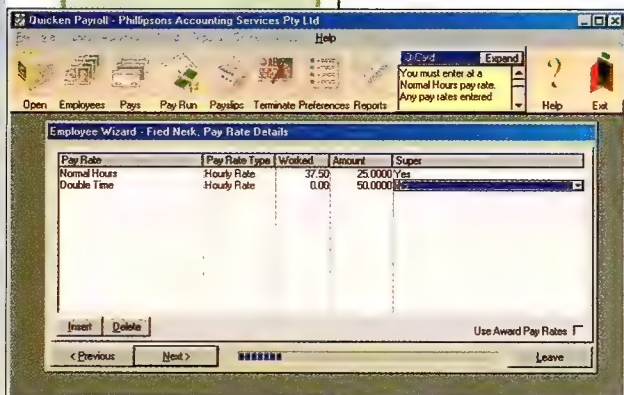
www.simplyaccounting.com/aus

For more information call **ACCPAC:**
(Aus)1800 222 040 / (NZ)0800 904 409
Or Visit: www.simplyaccounting.com/aus

Copyright © 2001 ACCPAC International, Inc. All rights reserved. ACCPAC, the ACCPAC logo and Simply Accounting are trademarks of ACCPAC International, Inc. and its subsidiaries in the United States and other countries.

PAYROLL

Quicken Payroll Premier 2002



RATING  **Price:** \$430
Contact: Quicken
Phone: 1300 784 253
Web: www.quicken.com.au

For over a decade, Quicken Payroll (also known as QuickPayroll) has offered a low-cost and feature-rich payroll management solution, with a strong focus on making processes simple and adding flexibility at every turn.

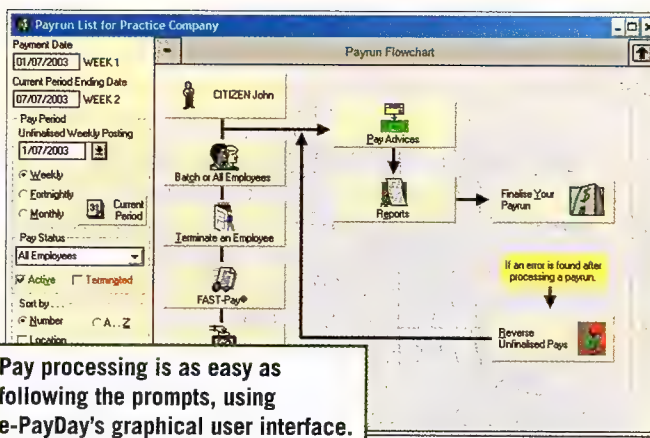
QuickPayroll was a leader in the small to medium product line-up in the '90s, however, the value-adding features offered in packages such as e-PayDay is now relegating QuickPayroll to the 'standard' end of the bench.

Logisoft e-PayDay 9

RATING  **Price:** Free for up to five employees; \$192.50 for five to 10 employees; \$396 for unlimited employees
Contact: Logisoft **Phone:** (07) 3269 3777
Web: www.logisoft.com.au

Most payrolls are plagued by glitches in software, constantly changing variables and regulations, a myriad of on-costs to calculate, and the ever persistent questions like: how much annual leave am I owed? Good payroll systems can ease the pain — and you should check out what is available, because for a relatively small investment, many of the payday headaches can be alleviated.

e-PayDay is no exception. Developed in Australia, the e-PayDay suite is packed with time-saving and value-adding tools. The variety of features and scalability options will cater for almost any payroll, no matter the size or complexity.



Wizards guide you through setup and various other tasks — terminating employees is particularly easy, with prompts for all the various components that should be considered.

Why you'd choose another product. This version of Quicken Payroll offers a fairly bland list of new features, which for users of the accounting package QuickBooks will be more or less obligatory, to keep in step with legislative and interface changes in both products.

e-PayDay allows you to integrate with a large number of accounting packages, which alleviates the need for you to use products from the same vendor purely for connectivity of data.

Why you'd keep using it. Quicken Payroll remains an easy-to-use and robust product with almighty flexibility in processes. It's particularly easy to erase your errors and get back on track in QuickPayroll. If you already use Quicken products, Quicken Payroll is a natural addition to your tool kit.

The flow-chart-style interface makes getting to know the product a breeze and all functions are very clearly defined and intuitive. There are limitations in report customisation in comparison to what QuickPayroll (see above) can offer. This could be an issue if you have specific reporting needs, but the reports offered in e-PayDay are extensive and reliable, catering for standard requirements.

Attention to detail is what really sets e-PayDay in a league of its own. There are impressive extras to assist you in human resource management; SMS options, so that you can send info to employees directly out of the system; employee rostering facilities to help out with scheduling staff; and tools to assist you with your occupational health and safety requirements.

The selection of extras is very impressive, making this package your best asset when it comes to managing not only your pays, but your entire employment responsibilities.

MYOB PowerPay 6

RATING  **Price:** \$549 **Contact:** MYOB
Phone: 1300 555 151
Web: www.myob.com.au

If you're an MYOB user, MYOB PowerPay could be worth a look. The interface is a bit dated in comparison to that of e-PayDay or Quicken Payroll, but for a simple payroll, this robust package would do the job well. Lack of flexibility is the greatest downfall of this product, so if you want something to accommodate your growing business, this is probably not the one for you.

— Kurt Best 

WE RECOMMEND

There is such great quality available these days that you have no excuse not to find a package to suit your needs. If sticking to the same stable of software is important, Quicken Payroll or even PowerPay are good choices. But for taking your human resources to another level, e-PayDay is hard to pass up — it has the lot.

TRY THIS FREEBIE

Logisoft e-PayDay Freepay

www.logisoft.com.au
This fully functioning version of e-PayDay Freepay for payrolls of five employees or less is absolutely free. If you grow beyond the five-employee limit, you can seamlessly move up to the other levels of the product.

POINT OF SALE

MYOB RetailManager Standard 6.5

RATING  **Price:** \$1,869 **Contact:** MYOB **Phone:** 1300 555 151 **Web:** www.myob.com.au

Point-of-sale (POS) systems were once the domain of large department stores and franchised retailers. Now there is a range of low-cost, high-powered packages to suit even the smallest shops. Can you afford to be without a POS system?

A POS system not only helps you calculate a sale and give out a receipt, it revolutionises your stock control, maintains account purchases and lay-bys, and tracks your sales, including staff performance.

There are three levels to the package, to suit a single user environment through to one with multiple POS terminals and locations. RetailManager Standard is the entry level, offering a replacement to a single cash register store. The top of the RetailManager family tree is Enterprise, offering a multiuser and multistore solution including compatibility with an impressive selection of interface devices such as pad tills, touchscreens, scales and bar code reader technologies.

The broad range of options continues inside the package, where processing sales and the myriad of related issues arising at point of sale are handled extremely well. There are handy value-added features, like the add-on sales prompt — a 'would you like fries with that?'-style alert to remind your sales staff there is a complementary product or service that could increase the current sale being processed.

Stock control is one of the primary motivations for POS systems to be adopted. Instantaneous update of stock levels, and keeping track of

statistics like fast and slow moving stock lines, make RetailManager an essential tool in managing your investment in stock.

You can track serial numbers, which enables you to follow an individual item from goods received right through to sale and ongoing warranty or service.

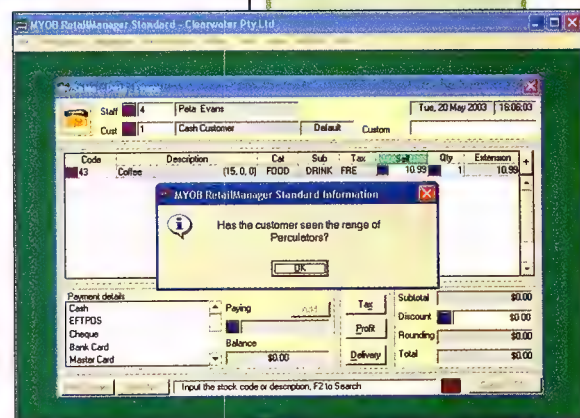
The label printing option is a great feature that gives retailers with nonstandard goods the ability to print bar codes and pricing labels. This feature would also benefit businesses that manufacture their own goods, allowing them to make up their own barcodes to automate their sales process.

MYOB now offers support seven days a week on RetailManager, so there's always help over the phone, no matter what your hours of business.

Why you'd choose another product. If you're

a Quicken QuickBooks user, it makes sense to go with QuickPOS, as it uses QuickBooks' reporting function and integrates seamlessly with it.

Why you'd keep using it. The RetailManager family of products is the ultimate in low-cost POS solutions. It offers fast and efficient processing of sales transactions, a robust and no-fuss interface, and an extensive list of features to cater to most retail situations.



Quicken QuickPOS Retailer 5

RATING  **Price:** \$1,495.95 **Contact:** Quicken **Phone:** 1300 784 253 **Web:** www.quicken.com.au

QuickPOS Retailer is the point-of-sale solution from Quicken. The latest version provides an impressive range of new options, including increased compatibility for peripheral devices and bar code printing options.

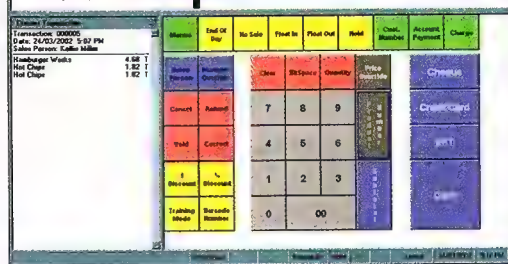
This package suffers from a complicated file structure involving QuickBooks as a back end, which makes installation and setup a little more complicated than alternative products. However, having QuickBooks in the background provides full access to its reporting tools, which is a plus so long as you are happy to use it.

The interface is clear and somewhat bold (no chance of needing your glasses to read the screen), but it's not as easy to use as it should be. Getting your head around the shortcut keys and screen status is unnecessarily complex.

New features in this version allow you to hold multiple sales screens open at once, which is handy

Hot Chips

1.82



for a busy retail environment or even a restaurant where you want to continue adding to a sale over a long period of time. There is now also the option of printing historical receipts or sales invoices, saving you a lot of time and effort when customers return to make an enquiry or dispute a past sale.

QuickPOS lacks the efficiency in design and abundance of value-added tools of RetailManager. However, it is becoming more appealing with each new release and would be a good add-on for existing QuickBooks users.

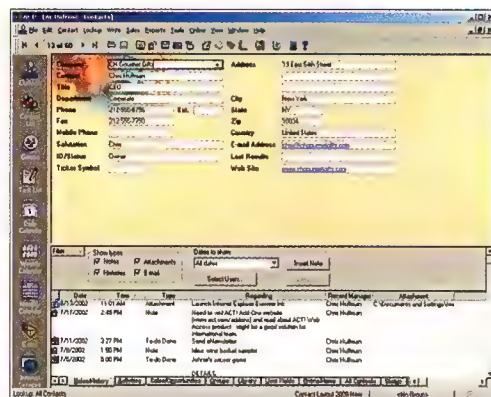
— Kurt Best 

WE
RECOMMEND

POS software and hardware just keeps getting better and better. No retailer managing stock, account customers, sales staff or any combination of the above should be without a POS solution. No matter the size or complexity of your retail environment, RetailManager offers a simple, sturdy and feature-rich solution.

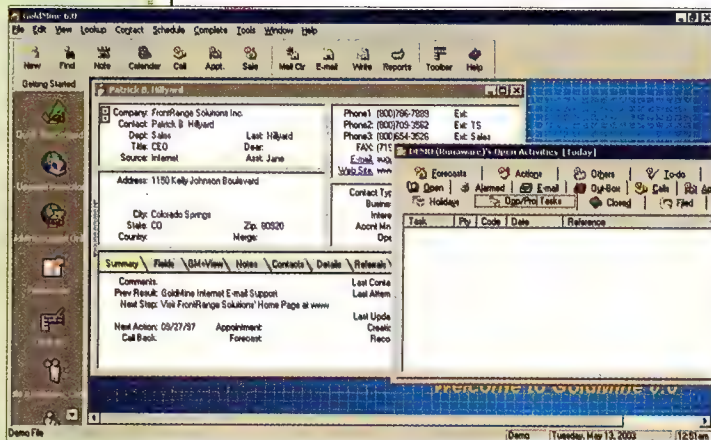
ACT! 6.0

The most visible subcategory of CRM for most smaller businesses is contact management, which keeps track of all customer dealings but doesn't necessarily tie this into broader supply chain issues. This software can be useful, but before embarking on it, make sure you're already making use of all the tracking facilities built into your email package. If you're not already using the calendar functionality available in Outlook, for instance, then you're not going to get much benefit from working with a contact management package.



Why you'd keep using it. As well as the PC version, ACT! is also available in a Palm OS version, making it useful for handhelds. (A synchronisation system for Pocket PC has also just been released.)

GoldMine is ACT!'s main competitor in the general customer tracking business. It's also a well thought out package with lots of useful options, but costs a little more per licence. Note that the prices given above for ACT! 6.0 and GoldMine are for single user licences; for CRM software to be useful, all your staff will need to be using it, so the cost can mount up quite quickly.



PROJECT MANAGERS

Microsoft Project 2002

RATING **Price:** \$1,213; upgrade, \$697 **Contact:** Microsoft
Phone: 13 20 58 **Web:** www.microsoft.com/project

All businesses have projects they need to manage. Project management software becomes useful when that task involves multiple people and resources, and a series of goals which need to be completed within specified time frames. Synchronising these tasks in an efficient and productive way is the role of the project manager, a position which effectively predates the PC era but which has been entirely redefined by software.

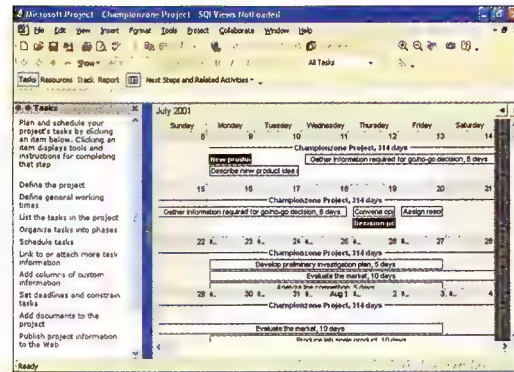
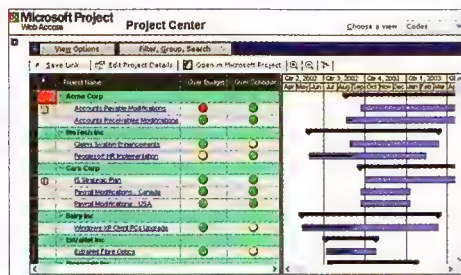
One of the earliest entrants into the project management field, Microsoft's might has ensured that Project (officially an extension branch of the Office family) has outlasted virtually all of its competitors and remained the industry standard.

The importance of the 'muscle factor' shouldn't be overestimated, though. Project itself has continued to evolve and add an almost exhausting range of features. Its dominance of the market is largely because of its suitability to the task at hand. It offers a dizzying range of output formats, highly customisable reports, and support for industry standards such as Gantt and PERT charts.

The latest release has also beefed up its

Web output options considerably. Given the importance of sharing project information amongst a large group of users, this is a particularly useful feature.

If you want to manage complex networked projects, you can also upgrade to Project Server.



Users familiar with Office will find it easy to navigate the product, and it makes good use of recent innovations such as task panes to speed up complex tasks.

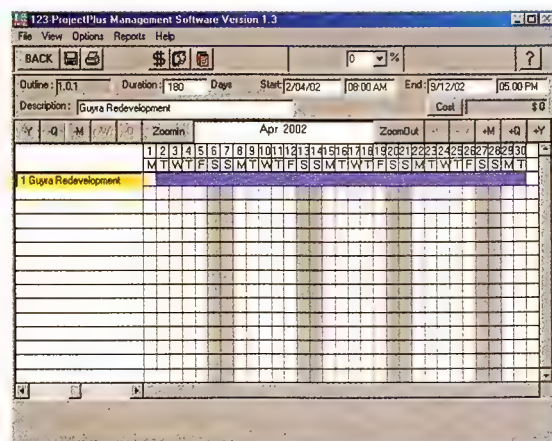
Why you'd choose another product. If your project management needs are particularly simple, then you may not be able to make use of many of Project's features, and might well balk at the price. One possibility in this instance is to use one of the shareware alternatives (see below). Another is to simply track your project using some of the tools already built into Office (Outlook and Excel are the most useful in this regard).

Why you'd keep using it. As the de facto standard for computerised project management, an extensive training and support community has arisen around Project. This is an important consideration — full-blown project management is not a trivial task and if you do master these skills, you'll want them to be portable.

123-Project

RATING **Price:** \$US29.95
Web: www.123-project.com

Microsoft Project may be flexible, but for smaller project management tasks it can be hard to come to grips with, not to mention overly expensive. Microsoft's dominance in recent years has meant that most of the competitors in the field fall into the shareware category. Even so, many are expensive, especially when you allow for Australian dollar conversions from the suppliers. At a budget \$US29.95, 123-Project stands out in this



field. It provides enough flexibility and basic reports for simpler project management tasks, and its interface makes for easy basic project management, even if you're not familiar with the underlying concepts. The main oddity is the export option, which restricts to bitmap formats. To

convert these into editable texts, you'll need some decent OCR software (see following page).

—Angus Kidman **PCU**

WE
RECOMMEND

Once seen as an essential element for most businesses, project management has now taken a more logical position as a specialised tool for larger companies. At this level, Microsoft Project remains the clear choice, with a huge range of flexible options and a large support community. If you just want to dabble, 123-Project offers painless, low-cost experimentation.

TRY THIS
FREEBIE

1PM

[www.tsm-soft.com/
category/business/
bzpro02.html](http://www.tsm-soft.com/category/business/bzpro02.html)

A basic project manager, suitable for small projects but less useful for complex or multiuser systems.

SOFTWARE
MEGA GUIDEOTHER
BUSINESS
SOFTWARE

Here are some pieces of software that we think are essential for most businesses.

FAX SOFTWARE
**Symantec
WinFax PRO**

www.symantec.com.au

An easy-to-use program that allows you to organise and send faxes from your desktop.

CONTINUED ON PAGE 114

OCR

OmniPage Pro 12 Office

RATING  **Price:** \$1,085 **Contact:** My Learning Systems **Phone:** (02) 9888 7800
Web: www.scansoft.com/omnipage

Once an oddity only found in specialist document processing outfits, optical character recognition (OCR) software is on practically every computer these days, if only because every scanner tends to ship with a cut-down version of one of the major products.

If your needs only extend to the occasional scanned document, this is probably sufficient. However, if you regularly need to process text documents such as faxes, or have large archives of existing information that you want to convert into digital form, you'll need a more sophisticated package. The dominant product in the OCR field



remains OmniPage, which has now reached version 12. What extra options do you get for your money? A notable feature is the ability to convert PDF files, making it possible to edit and process content drawn from existing documents. Formats are more accurately reproduced, saving time in laying out

existing documents again. Double-page book spreads can be scanned simultaneously, and the software automatically identifies each page. It also supports multiple languages — useful if you're working with overseas businesses — and data can be output in XML formats for more advanced applications.
— Angus Kidman

VOICE RECOGNITION

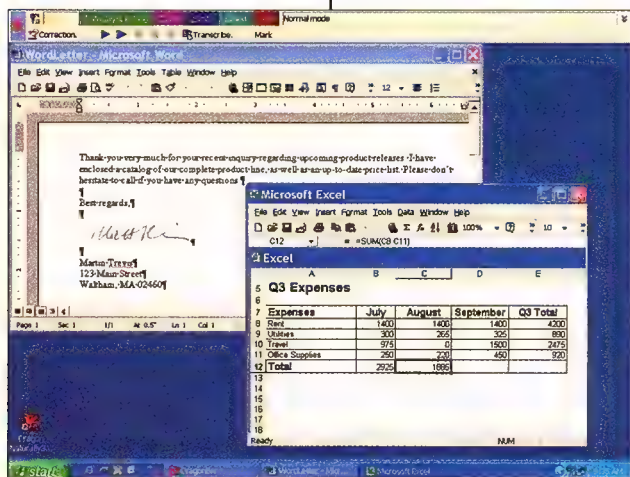
Dragon NaturallySpeaking 7 Preferred

RATING  **Price:** \$399
Contact: Voice Perfect Systems
Phone: (03) 9866 5733
Web: www.scansoft.com/naturallyspeaking

by the Dragon family of products, which has seen several changes of ownership in recent years (being bought out first by Lernout & Hauspie and then by ScanSoft). Dragon's NaturallySpeaking Preferred Package, now into version 7, offers good support for Australian accents, and a relatively brief training period. Specialised dictionaries are also available for some professions, such as medicine and law. The package supports a range of popular applications, including Word and Excel.

For people who mostly use non-text applications on their PCs or who only produce short documents, the training effort involved in any speech recognition package may not be worth it. If you regularly produce larger slabs of text (and don't have to share your office with anyone else), then the time investment in training could make you notably more productive. One warning: make sure your PC meets the minimum specifications (especially the 128M of memory).

— Angus Kidman



Speech recognition software is still some way away from the futuristic vision of systems that can instantly recognise any voice in a range of accents or languages. Equally,

it has come a long way from the earliest PC applications, which required users to speak at a robotically slow pace, and lost control when confronted with an Australian accent.

The voice recognition market continues to be led

ECOMMERCE

ezimerchant Pro 3.5

RATING  **Price:** \$449 plus \$23.95 per month transaction server fees when enabled **Contact:** Infomedia
Phone: (02) 9913 4755 **Web:** www.ezimerchant.com.au

ezimerchant Pro is one of the easiest and most cost-effective ways we've found to set up shop on

the Web. Best of all, it's an Australian product and one that enjoys enormous popularity overseas. ezimerchant is an all-in-one solution, offering catalogue, shopping cart and checkout features, as well as order processing, which is handled by the secure ezimerchant transaction server. You can opt to process credit card transactions manually using

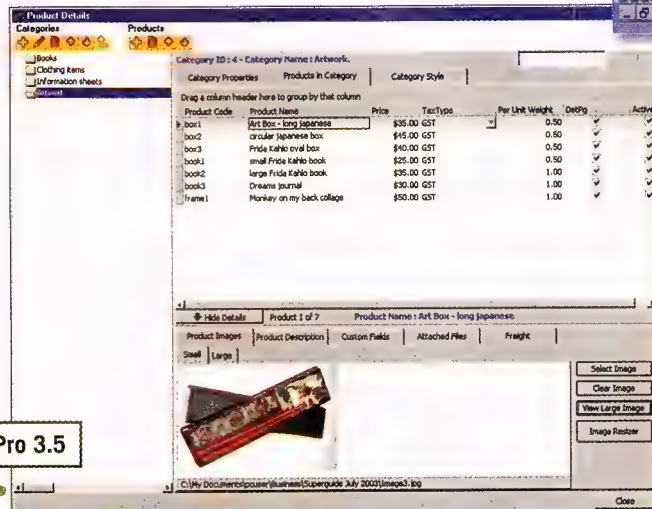
SOFTWARE
MEGA GUIDE

your existing Merchant Account, or you can integrate your ezimerchant site with a payment gateway (the supported gateways, between them, support accounts with most leading banks). Apart from the transaction server, all other features can be hosted on your own Web site and require no special server tools, apart from FTP access.

ezimerchant Pro is easy to use and provides additional tools for managing and marketing your online business, including a bulk email tool, the ability to import product data from a database, and to export tools for sending sales data to popular accounting software. You don't need to know HTML to set up a site, and the whole setup is done via an easy-to-use point, click and type interface.

— Helen Bradley

ezimerchant Pro 3.5



BUSINESS MANAGEMENT

MAUS KPI Scorecard Professional Edition

RATING Price: \$699 Contact: MAUS Business Systems
Phone: (02) 9957 3827 Web: www.maus.com.au

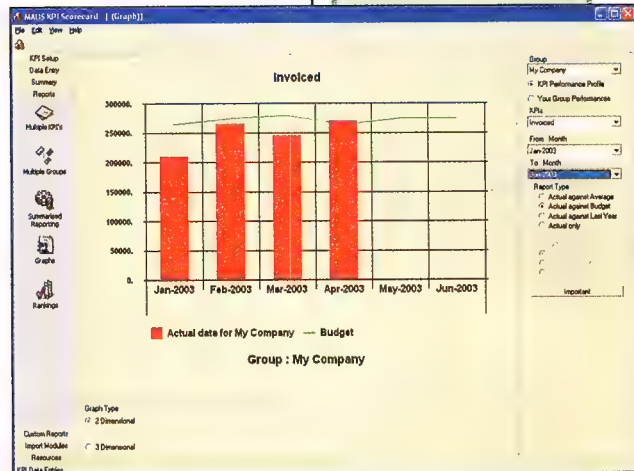
Key performance indicators (KPI) are used to track business performance such as sales, number of calls, billable hours and so on. MAUS KPI Scorecard provides an easy-to-use structure for recording and tracking KPIs. For this type of software, it's essential that data entry and reporting is quick and easy, so that results can be determined and used as inputs back into the system. MAUS KPI Scorecard meets this requirement.

Comments can be included with data (for example, explaining why sales were down for the current period), so you can better understand performance variations. Data can be entered and analysed on a weekly or monthly basis — the choice is made at setup time and can't be changed.

Once data is entered, creating reports (both text

and graphs) is simple. Comparisons can be made between actual figures from one year to the next — actual against budget, actual against average and so on, using preset reports or those you create yourself. Additionally, data can be isolated for groups within the business such as by product, project or employees. There's not a business that couldn't (or shouldn't) use this software.

— Helen Bradley



TIME RECORDING

Journyx Timesheet 5.0

RATING Price: Free (for up to 10 users)
Web: www.journyx.com/products/timesheet/

While even single-person businesses can benefit from accurately tracking the time spent on different projects, at that scale, a simple spreadsheet application will probably suffice for most users. However, businesses that have multiple employees and need to allocate costs and salaries based on particular jobs can benefit from specific time recording packages.

There is a huge range of commercial and shareware time recording products available, many

of which overlap with the project management category (see page 111). However, there's no need to spend huge amounts in this field. Journyx Timesheet is free for up to 10 users and contains most of the features you'd want for regular timesheet management. Upgrades for larger groups of users start from \$US1,975, and various custom modules can also be added. >>>

The screenshot shows the 'Journyx Timesheet' interface. It displays a grid for recording time spent on various tasks. The columns represent days of the week (Sun, Mon, Tue, Wed, Thu, Fri, Sat) and the rows represent different tasks or projects. The 'Task' column lists items like 'Corporate', 'Homebase Productions', 'AAA Book Co', 'AAA Book Co', 'Dette Inc', 'New', 'Corporate Website', and 'Intranet'. The 'Pay Type' and 'Bill Type' columns are also present. The grid shows time entries in hours and minutes. At the bottom, there are buttons for 'Save Changes', 'View Timesheet', 'Send for Approval', and 'Approval Report'.

SOFTWARE MEGA GUIDE

OTHER BUSINESS SOFTWARE

CONTINUED FROM PAGE 112

DISK IMAGING

Symantec Norton Ghost

www.symantec.com.au

You can easily create images of your computers' hard drives with this program, making backup a cinch.

FIREWALL

ZoneAlarm

www.zonealarm.com

Keep your data and your PC safe from hackers.

ANTIVIRUS

Eset NOD32

www.nod32.com.au

In our antivirus tests, we found NOD32 to be the best at detecting and eliminating viruses.

<<<

Journyx Timesheet stores information in standard SQL format, and it can therefore be accessed by other applications. However, the software

requires a continuous Internet connection to function efficiently.

— Angus Kidman

BUSINESS GRAPHICS

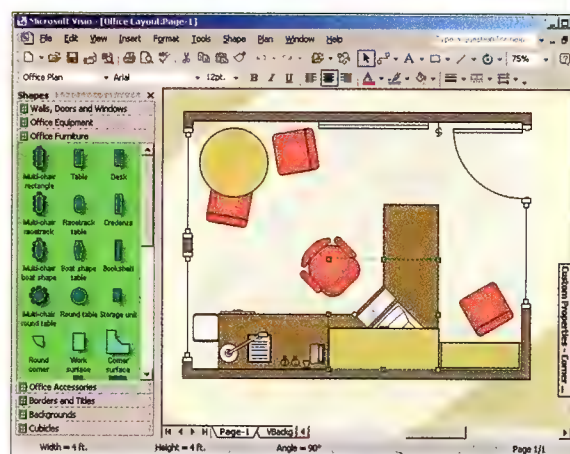
Microsoft Visio 2000 Standard

RATING  **Price:** \$409; upgrade, \$206 **Contact:** Microsoft **Phone:** 13 20 58 **Web:** www.microsoft.com/visio

Need to create an organisation chart? Trying to work out where to place all the furniture in your new premises? While it's possible to solve these problems on your PC using a standard graphics package, these often lack flexibility and may require extensive training. A better alternative is to use a business graphics package, which is specifically designed to create business-related diagrams quickly.

The long-time category leader in this field has been Visio, which now falls into the Microsoft Office family (although it's sold as a separate package to the core applications). This makes the interface particularly straightforward to use for anyone familiar with Excel or Word.

Visio's unrivalled family of ready-made templates and images allow you to create a huge range of documents, and its SmartShapes alignment system means that even the visually illiterate can keep all



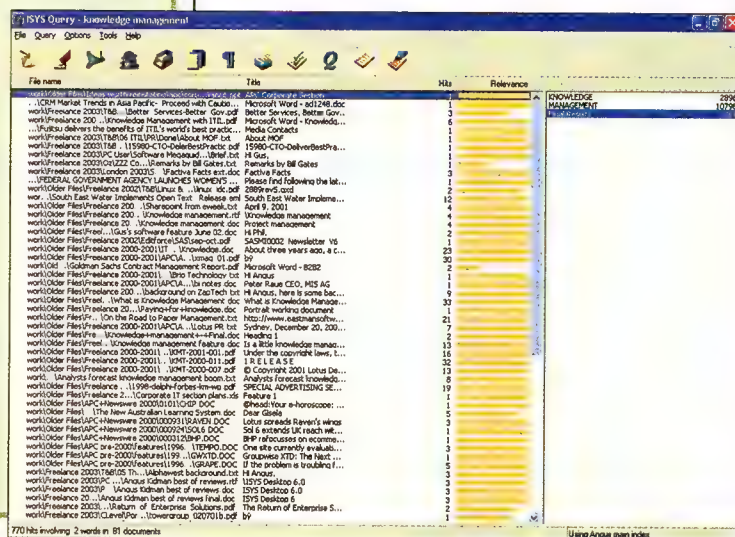
the relevant elements neatly lined up. A free viewer for Visio diagrams is also available, so you don't need to equip everyone in the organisation with the software to make effective use of it.

— Angus Kidman

KNOWLEDGE MANAGEMENT

ISYS:desktop

RATING  **Price:** From \$700 (single user) **Contact:** Odyssey Development **Phone:** (02) 9439 5800 **Web:** www.isys.com.au



The core of any effective knowledge management system is the ability to quickly access information that already exists in your business. While the document indexing options within Windows XP are much better than in previous versions, they still pale in speed and comprehensiveness next to ISYS, an Australian-developed product that has been available in various forms for over a decade.

ISYS creates a single index of every document stored on PCs in your organisation, covering virtually every format you can imagine, and then allows you to perform complex structured searches on them. The initial indexing process is impressively speedy, but the real rewards come when you perform individual searches — even complex Boolean expressions are processed in seconds. It handles network documents with ease, and automatic updating options ensure that your information store remains current.

While the ISYS products won't encourage your organisation to share information (a challenge, no matter what software you use), they will make accessing the knowledge you have much more straightforward. Organisations with extensive intranet setups should also consider ISYS:web, which offers even more extensive indexing options.

— Angus Kidman **PCU**



Perfect



A Perfect mix of sophistication and Intelligence from the most stylish LCD Monitor on the market.

Featuring a slim ultra-bright display, super fast 16ms response time, SRS® surround sound and the unique Digital Photo Frame - the BenQ FP591 and FP791 series delivers the perfect audio-visual experience.

BenQ Australia 102-104 Beaconsfield Street, Silverwater, NSW 2128. Tel: +61 2 97146800. Website: www.BenQ.com.au
optional extra

BenQ

Enjoyment Matters



Nokia N-Gages E3

Nokia's cool new portable multiplayer console stars in Glenn Rees' report on the amazing Electronic Entertainment Expo.



Games, phone, music
— it's hot: **Nokia N-Gage**

The first thing that hit me when stepping into the gigantic foyer of the Los Angeles Convention Center was the daunting, low rumble, not unlike a huge thunderstorm in the distance. And that was still some distance away from the main halls of the Electronic Entertainment Expo, more commonly known as E3.

I'm not exaggerating. Walking into the first of the massive halls, just about everyone remarked about immense noise, as well as the incredible lights display that would make a thunderstorm pale in comparison.

Such is the scale of E3. With 400 exhibitors covering more than 48,000 square metres of exhibition space, there were literally tens of thousands of speakers pumping out soundtracks and sound effects for thousands of games and other entertainment software.

But while my ears and eyes took some time adjusting, E3 offered a dazzling array of delights, with over 1,350 never-before-seen games on display. Obviously, any report on E3 can only cover a fraction of the highlights. So let's start with the biggest shock of the expo — Sony's announcement of the PSP (PlayStation Portable).

It's not due until late 2004 at the earliest, so details were sketchy. But we did find out that it will feature a 4.5in, 480 by 272-pixel backlit screen, rechargeable battery, and a new 2.4in, 1.8G disc called the Universal Media Disc.

More imminent is Nokia's N-Gage, which is scheduled for worldwide release in October. And having had a good play with the new portable games deck, I reckon Nokia could have a hit on its hands (it will sell for \$499).

Its screen isn't quite as good as those found on many new handheld PCs, with 176 by 208-pixel resolution and 12-bit colour, but graphical games like Tomb Raider scrub up amazingly well on the little screen.

And the device is getting good support from major games publishers, with around 20 titles available by Christmas. These include THQ's Red Faction, Activision's Tony Hawk's Pro Skater, Sega Rally, Tom Clancy's Ghost Recon from Ubi Soft and, Eidos' Tomb Raider. Even Nokia itself is getting in on the act with its own game, Pathway to Glory, "an online warfare community" due out next year.

The N-Gage feels like a small (137g) version of a typical game console, with a landscape design and eight-way direction controller. It has a standard MultiMediaCard (MMC) slot, and the games themselves, which are Java-based, will be distributed separately on MMC media.

Being from Nokia, the N-Gage also has a built-in mobile phone, featuring support for tri-band GSM, WAP over GPRS, XHTML, full email capabilities, multimedia messaging and Bluetooth. And this is what makes the N-Gage most exciting. With multiplayer games like Tomb Raider, you'll be able to play with your friends wirelessly using Bluetooth. Today's mobile networks don't support true multiplayer gaming, but you will be able to create, edit and share your own gameplay sequences over the phone.

If that's not enough, the N-Gage also features a stereo FM radio, digital music player, and USB port and Windows software for downloading MP3 files.

Xbox, PS2 and GameCube news

Not to be left out, Microsoft and Sony also announced new additions to their consoles. Microsoft released Xbox Music Mixer, possibly the first step in turning the Xbox into an all-round home entertainment device.

Sold separately with a microphone, the Music Mixer will allow you to use your Xbox to play slideshows of your digital photos set to music, sing karaoke and create your own party song lists with 2D and 3D visuals. You'll still need to do the creative work on your PC and download the files by connecting your Xbox using a standard Ethernet network.

New Xbox games previewed at E3 included the eagerly awaited Bungie Studios Halo 2, due out by the end of 2003. It features a completely new — and simply breathtaking — graphics engine plus new enemies, weapons and vehicles. Lionhead announced the Xbox-only game Fable (formerly known as Project Ego) is due out



Finally, karaoke for the Xbox: **Xbox Music Mixer**

E3 HYSTERIA



E3 is a lot like its host city, Los Angeles — big (in every sense of the word), loud, sprawling, fun, bold, brassy, tacky at times, but never boring. Navigating around the expo, you may be drawn to the biggest crowds, but often that's just a line-up to get photographed next to a scantily clad model. Talk about cheap thrills. Still, the expo has something for all ages, from Disney titles to the golf sims, although the action is undeniably centred around, well, action. The accompanying photos may give you some idea of amazing array of lights and sights at E3, but there's no way to capture the incredible cacophony of sounds.



before Christmas. In the tradition of, but different from, Lionhead's smash hit PC game *Black and White*, *Fable* will offer seemingly endless gameplay, character and story elements, set in a fantasy universe.

Sony's new PlayStation2 addition was EyeToy, a USB camera which will be released in September. EyeToy will allow users to record short video messages to be used when PlayStation2 Online is released in Australia later this year. EyeToy will ship with 12 minigames that will allow the user to star in each game using captured video from the camera. There were many new PlayStation2 games previewed as well, with *Gran Turismo 4* probably the biggest and most impressive.

Nintendo also came out fighting, with its main emphasis being on the connectivity between the GameCube and the Game Boy Advance. Several new games will use this link, including two new Sims games and *Final Fantasy*. A raft of new GameCube games were also featured, including *Star Wars Rogue Squadron III: Rebel Strike*, and *Mario Kart Double Dash*.

Half-Life 2

Judging by the length of the queue to view the demo, *Half-Life 2* was the most eagerly awaited game of E3.

But with the original *Half-Life* having revolutionised PC games back in 1998, that's hardly surprising.

Valve, *Half-Life*'s maker, wasn't giving much away, but the demo was worth the wait. Featuring an all-new graphics engine, Source, which took four years to develop, the beautifully rendered graphics were the most obvious improvements over the first version. In particular, the characters are probably the most realistic ever seen in a game. Each person has 40 facial 'muscles' to convey more lifelike human emotion. With more advanced AI, characters and objects also respond far more realistically.

Like the original, even the narrative sequences are depicted by the in-game graphics engine — there are no cut scenes. But it's the involving >>>

Larger than life: the action at E3.

story-line that made the original Half-Life different from any other action game, and you can be certain this new version will have even more twists and turns in the plot. We don't know much, but we do know that the game again stars research scientist Gordon Freeman, who has to save the world from a

new crop of even scarier aliens, this time in an area that strongly resembles Eastern Europe.

And the biggest surprise of all? Half-Life 2 is scheduled for release in September. That's right, this year. Having spent five years working away on the sequel, Valve obviously decided against the endless early previews of some other notable games.

DOOM and gloom

DOOM III also was demonstrated at the expo, and as we expected from the previously available previews, it looked awesome and had audiences salivating for its release later this year. But I came across an unknown game which could possibly out-doom and gloom even DOOM III.

Due out sometime next year, Stalker: Oblivion Lost, features dark and incredibly atmospheric visuals as stunning as any at the expo, with lighting and, more particularly, shading far better than any game that I've ever seen. It's no wonder nVidia chose to use the game to show off its new GeForce FX 5900 graphics card (see opposite).

Set in 2006 in the Chernobyl area, after a massive nuclear explosion has devastated the area, your job is to become one of the so-called Stalkers — poachers who venture into the no-go area in search of artefacts and information to sell to organisations and individuals who will pay handsomely for your efforts. Naturally, you will have to fight the various kinds of mutants that populate the area, but it's the search for information and artefacts that's the key to the game.

The game world is huge — 30 square kilometres — and the makers, GSC Game World, working about 100km away from real-life Chernobyl, tried to base it as much as possible on the actual area.



The Sims 2

How do you follow up the best-selling game ever? Somehow, Maxis has managed to do it — and then some. From the demo I saw, the Sims 2 quite simply leaves the original for dead. There's an all-new and much more realistic graphics engine that gets you up and even more personal with your characters. The sims themselves are also far more responsive to the situations and people they encounter, their responses vary depending on their age and experiences, and they can form more complex relationships. They are also far more expressive, which makes the game even more entertaining.

But probably the biggest improvement is that your sims can now span generations, which adds another dimension to the game. Your characters' offspring are similar to their parents, but still very much individuals. It's done using a form of genetics, and there are literally thousands of possibilities for how your offspring will turn out.

The original Sims was successful because it appealed to the voyeur in all of us, but the Sims 2 will have that and offer a much more stimulating simulation experience.

Other intriguing new sims on display were Microsoft's Norse mythology-based Mythica (check out this month's cover CD for the trailer), and Lionhead's The Movies, in which the player attempts to build a Hollywood movie studio. Lionhead's Black and White 2 was also given a very early preview.

The Australian presence

An Australian stand, sponsored by the Victorian government, flew the flag for our software developers, with one of the more impressive titles being Auran's Trainz Railroad Simulator 2004. Available later this year, the PC simulator allows you to drive a good selection of steam, diesel and electric trains.

The graphics are very impressive, but the biggest point of difference is the fact that Trainz is a full railroad simulation, whereas Microsoft Train Simulator 2, which was also on display at E3, is a train-only simulation. So, as well being able to drive trains, Trainz allows you to do everything else required to build a railroad — and you can see the full impact of your work on the community.

Perhaps the biggest attraction at the Australian stand was Laser Golf, a device that feels and works



Laser Golf director Michael Newman shows fine style with his new lifelike Laser Golf PC device.



Fighting mutants:
Stalker: Oblivion Lost



remarkably like a real golf club. It works by using an infra-red sensor to 'hit' the ball, which in turn interacts with the Laser Golf PC software via the USB port. You can play with up to seven friends or against a computer-generated opponent. The game comes with a number of courses, with more available for download from the Web site.

Still self-distributed and available only from www.lasergolfgame.com, this game has huge potential, given the popularity of golf around the world. My only complaint is that it's too lifelike — my Laser Golf shots were still, well, embarrassing.

nVidia's GeForce FX 5900

Perhaps not surprisingly in retrospect, nVidia announced that it was ditching its high-end GeForce FX 5800 graphics chip for the brand-new FX 5900. Even nVidia poked fun at the FX 5800's massive heatsinks and fans at a post-launch E3 party, with a video showing how useful the FX 5800 was — as a hair dryer, barbeque and so on.

Perhaps this gives some insight into the company's collective relief after serious production problems prevented the FX 5800 from being readily available in Australia and other parts of the world. nVidia freely admits to the production problems, which were mainly due to the company 'learning' how to make the new 0.13-micron FX chips. But nVidia insists that all that is behind them now, and the FX 5900 is in full production right now.

What's more, nVidia claims the FX 5900 is significantly faster than both the FX 5800 and ATI's Radeon 9800 Pro, which we have found to be roughly equal in our testing. However, it's not until you play the upcoming DirectX 9.0 games that you will see its true capability, according to nVidia. For example, the company claims its new chip is up to 45% faster than the 9800 Pro on DOOM III.

However, nVidia's mantra for its FX range is image quality (and most particularly shading), and not so much speed, with its whole FX range supporting DirectX 9.0 and using its advanced new technologies such as UltraShadow and the CineFX 2.0 engine.

The other good news for consumers is that nVidia is whittling down its once mind-boggling range of chips to just three main types: the budget FX 5200, midrange FX 5600 and high-end FX 5900, although there will be some variations such as Ultra and standard versions of the chips.

But wait, there's more

Much, much more — far too much for one person to see, let alone cover in a story of this size. Just of some of the other impressive games previewed at E3 included: *Need For Speed Underground*; *Homeworld 2*; *Microsoft Flight Simulator 4*; a *Microsoft Age of Mythology* expansion pack; two *Neverwinter Nights* expansion packs; and a legion of war sims including *Commandos 3*, *Call of Duty* and *Full Spectrum*.

There was also an army of Tolkien-based games, including *The Hobbit* and *War of the Rings* (the latter being the first Lord of the Rings real-time strategy

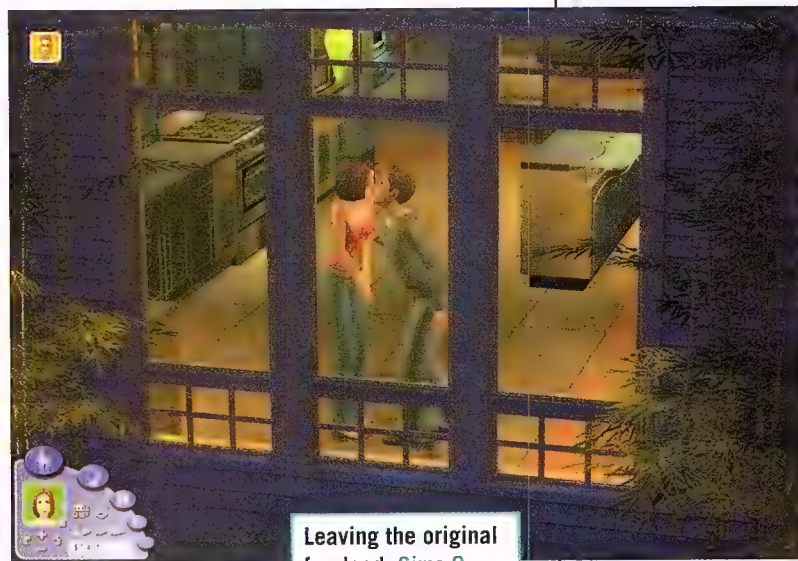


The kids were happy:
SpongeBob SquarePants

game); and a battalion of fighting games including my favourite, Eidos's *Backyard Wrestling*. Online games were also popular, of course, with the big names being *World of Warcraft*, *The Matrix Online*, *Final Fantasy XI*, *Resident Evil* and *EverQuest 2*. LucasArts had an interesting assortment of games ranging from *Star Wars: Knights of the Old Republic*, an RPG-based 4,000 years before the *Star Wars* movies, to the tongue-in-cheek action game, *Armed & Dangerous*.

Kids were also well catered for, with new games including Disney's *Extreme Skate Adventure* in which a bunch of Disney characters go skateboarding; *SpongeBob SquarePants*, featuring the coolest new Nickelodeon character; and *Bionicle*, which is based on every boy's favourite toy, Lego.

Glenn Rees travelled to E3 as a guest of nVidia. 



Leaving the original
for dead: *Sims 2*

Enter the Matrix

Julian Schoffel
reviews the
latest games
for PCs and
consoles.

RATING **E** **Price:** \$89.95 **Contact:** GameNation **Phone:** 1800 060 605 **Web:** www.enterthematrixgame.com
Classification: MA(15+) ✓ Spectacular combat sequences
✓ Matrix ambience ✓ Outstanding audio ✗ Mediocre 3D visuals ✗ Savegame system

In the realm of computer games, Enter the Matrix (ETM) is an unusual beast for a variety of reasons. For starters, the Wachowski brothers (the brains behind the *Matrix* movies) are self-confessed game freaks. As a consequence, they decided to take a very active role in the development of ETM. The end result is a fairly slick 3D action game that manages to capture the general feel of the *Matrix* films — no mean feat, I

think you'll agree! ETM is based around the *Matrix* trilogy and features an original story-line that weaves in and out of the events depicted in the films. The Wachowski brothers even went to the trouble of filming exclusive footage for ETM while they were working on the cinematic incarnations of the trilogy. Needless to say, this is unheard of in a games industry where the majority of movie tie-ins are cynical affairs, quickly

slapped together to cash in on a film's marketing hype.

While ETM is set in the *Matrix* universe, you don't control the main characters from the films (Morpheus, Neo, Trinity). Instead, the game is centred around two characters introduced in *The Matrix Reloaded*, Ghost (male) and Niobe (female), but you may find yourself fighting alongside some of the major characters as the story-line unfolds.

ETM is essentially a story-driven 3D action game which takes place both inside and outside of the Matrix. After picking a character, you are catapulted into a series of increasingly difficult missions. The core of the game revolves around combat. Niobe and

Ghost sport an impressive arsenal of kung-fu moves and they're both handy with a firearm as well. There are also a number of driving sequences where your character takes control of a conventional vehicle or a hovercraft.

In a combat-intensive game like ETM, an intuitive control interface is incredibly important. In the PC version, you use the keyboard for movement and the mouse for punching or kicking. Niobe and Ghost launch into incredibly acrobatic offensive manoeuvres which must be seen to be believed! Furthermore, while the control system may initially seem simplistic, you'll soon discover a myriad of additional moves and blocks which can only be accomplished using specific mouse/keyboard combinations. Throw the special Focus ability into the equation (which is essentially the same as 'bullet time' in the movies) and you end up with some pretty unique and spectacular fighting sequences!

A game based around the *Matrix* films demands oodles of visual flair, but I was disappointed with the third-person 3D visuals. For the most part, the 3D environments look average, featuring mediocre textures along with the obligatory range of lighting effects. The character shadows in particular looked very dodgy, but switching these off didn't detract greatly from the visual appeal of the game. On a positive note, the graphics engine automatically scales to match the power of your hardware, keeping frame rates chugging along nicely.

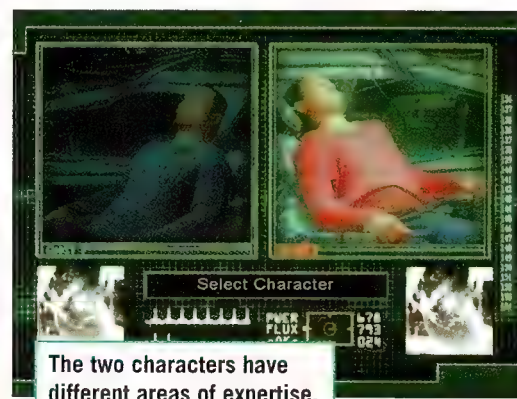
ETM's sound effects, music and voice acting were uniformly excellent and, for once, I actually found myself enjoying the dialogue sequences (not a common occurrence in a PC game, I can assure you). Like the films, ETM uses adrenaline-pumping techno tunes to spice up key combat sequences. The end result is a game that successfully replicates the audio ambience of the *Matrix* films.

The sumptuous cinematic cut sequences, authentic ambience and slick combat will keep *Matrix* fans glued to the computer screen. However, if you're a PC gaming purist with no particular interest in the films, ETM's average 3D visuals, console-style savegame system and frenetic action sequences may start to grate. In the end, the choice is yours: do you take the left door or the right door?

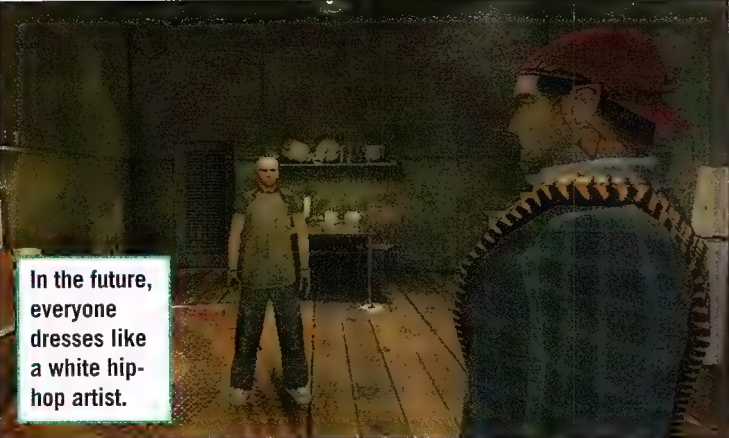


Authentic 'bullet time'.

Entering the Matrix.



The two characters have different areas of expertise.



In the future, everyone dresses like a white hip-hop artist.



The physics engine is impressive but adds little to gameplay.

Devastation

RATING  **Price:** \$89.95 **Contact:** Manacomm

Phone: (07) 3870 4900 **Web:**

www.arushgames.com **Classification:** MA(15+)

✓ Slick 3D visuals ✓ Beefed-up physics engine

✓ Solid 3D shooter ✗ Clichéd characters

✗ Same old, same old

A couple of months ago, I previewed a promising new 3D shooter known as Devastation (see *PC User* May, page 128).

At the time, I was depressed because Unreal II hadn't quite lived up to my lofty expectations, and the preview build of Devastation gave me hope that a fresh and innovative new 3D action offering was about to emerge. Well, I was totally wrong. The final version of Devastation has a few bells and whistles, and it is flashy-looking, but it plays pretty much like every other 3D shooter ever conceived.

The game is set on Earth in the not-too-distant future (2075), where a huge corporation known as Grathius has essentially taken control of the entire planet. As is the case with many futuristic storylines, the world of Devastation is depicted as bleak, ravaged and pretty damned depressing. Thankfully, Grathius doesn't have everything its own way and a burgeoning resistance movement seeks to shift power back to the people. As you might expect, your character, Flynn Haskell, plays a key role in this struggle for liberation.

Unfortunately, the story-line is pretty weak and the game suffers from the usual array of stereotypical characters, all of whom spout endless, clichéd-ridden drivel. Nope, *Half-Life* or *Thief: The Dark Project* this definitely ain't. However, Devastation has a number of other things going for it.

For starters, it uses a beefed-up version of the next-generation Unreal engine, which means you can expect lots in the way of gratuitous eye candy. Thankfully, the graphics can be adjusted to run smoothly on most midrange PCs. Devastation also sports a fancy physics engine, but this amounts to little more than lots of wobbling, moveable objects like cans, bottles, crates and so on. While these physics effects may look kind of cool, they don't really add much to gameplay.



Sigh . . . Why do they always make the future so gloomy?



Now that's a world worth saving . . .



Obligatory oriental-themed level.

At its core, Devastation is a 3D shooter which faithfully adheres to the venerable set of gameplay conventions pioneered in *Wolfenstein*, *DOOM* and *Quake*. On one hand, this is good because most players will feel right at home with the movement and weapon controls. On the other hand, it's well . . . kind of unimaginative, I guess.

That said, Devastation does offer two moderately interesting gameplay elements: 'simulation' difficulty mode and team-based combat. The former provides an agonisingly high degree of difficulty, catering to particularly masochistic players, while the latter introduces a simplistic tactical squad element to the game (players can issue commands like 'attack', 'defend', 'hold', or 'follow' to AI-controlled squad members).

Devastation also features the usual array of multiplayer options, including Deathmatch, Capture the Flag and Territories. In the latter, you hunt down the enemy, and destroy their base and spawning devices.

Devastation is a relatively engaging, albeit fairly derivative, 3D shooter that looks and sounds great. But if you have a penchant for more innovative action fare, you may prefer to check out *Enter the Matrix* (see previous review) or just hang tough until *DOOM III* hits the shelves in November. >>>

Cossacks: Back to War

RATING  **Price:** \$69.95 **Contact:** QV Software **Phone:** (02) 9748 2555 **Web:** www.cossacks.com
Classification: G(8+) ✓ Two new nations to play ✓ Stacks of single-player maps ✓ Good RTS fare ✗ Lacks a proper single-player campaign ✗ Multiplayer viewing system



Not a bad little RTS offering.

When it first came out a couple of years back, Cossacks: European Wars made quite an impact among real-time strategy fans. Now, CDV has released Cossacks: Back to War (CBW), a sort of cross between an upgrade and an expansion pack. In truth, CBW can't really be categorised as an expansion pack because it doesn't require a copy of the original game to work. It is essentially an upgraded re-release of the original, no doubt aimed at luring in a totally new crowd of first-time players.

At its core, CBW is identical to the original game: an epic, historically themed RTS with an emphasis on multiplayer. CBW also includes two new nations to play (Switzerland and Hungary), 101 extra single-player missions, some fresh units and buildings, an upgrade mod and a couple of special multiplayer features. While CBW features an excellent set of tutorial missions, it lacks a proper single-player



campaign. In my opinion, this is a somewhat glaring omission. Sure, there's a stack of new single-player maps, but they're all standalone and no substitute for a full-blown campaign. The new units on offer include a useful Bedouin camel rider for Algeria and Turkey, along with a handy defensive cannon. While the additional Switzerland and Hungary nations also include their own fresh complement of units and buildings, the majority of them tend to feel like slightly tweaked versions of existing ones.

The beefed-up multiplayer component includes a new Automatic Championship System, which charts online competition and allows top players to compete against one another. There's also a new VIZOR system that allows you to watch online games in progress, without directly taking part yourself (I must admit I rate the excitement level of this right up there with watching the mould grow in my bathroom).

If you're a hard-core RTS fan and you've never played the original Cossacks, then you might find Cossacks: Back to War worth a look.

X-Men 2: Wolverine's Revenge

RATING  **Price:** \$89.95 **Contact:** Activision **Phone:** 1902 263 555 **Web:** www.activision.com **Classification:** M(15+) ✓ Original story-line ✓ X-Men characters ✗ Can't save in the middle of a level ✗ Console control system ✗ Feels like a rush job



The game lacks finesse.

In stark contrast to Enter the Matrix (see page 120), X-Men 2: Wolverine's Revenge (WR) is a cynical movie tie-in. WR is a third-person perspective 3D action game in which you take control of the deadly (and exceedingly hairy) character of Wolverine. On the whole, the game feels more than a tad rushed.

Like Enter the Matrix, WR features an original story-line, rather than simply regurgitating the plot of the current X-Men film. As the name suggests, the game is built around Wolverine's quest to wreak revenge on the secret organisation that created him. At the start of the game, Wolverine discovers he has a deadly virus.

The clock is ticking and he has only two days left to find an antidote. To obtain a cure, Wolverine must confront his past

by returning to the sinister Weapon X facility. As you might expect, the game also includes the obligatory complement of classic X-Men bad guys including Wendigo, Sabretooth, Juggernaut and Magneto.

WR was obviously designed first and foremost as a console game, and the PC version suffers as a direct result. For starters, the control scheme is obviously tailored for a console gamepad and doesn't suit the mouse/keyboard combination favoured by PC gamers. WR also features a console-style savegame system, making it impossible to save a game in the middle of a level. This leads to a lot of boring repetition as you are forced to repeat entire levels before you can save your progress.

Core gameplay of WR is pretty standard 3D action fare. You spend your time exploring the 3D environments, engaging in combat and occasionally using stealth to avoid opponents or security devices. While Wolverine's special abilities make the combat sequences seem quite novel at first, things soon fall into a tedious, repetitive pattern. For the most part, the 3D visuals of WR are quite well done. The voice acting and sound effects are also competent, although a little repetitive.

X-Men 2: Wolverine's Revenge is mediocre at best. My feeling is that given a little more time, the designers could have polished it into quite an entertaining little action romp.



Now there's something you don't see every day: a break-dancing mutant.

1503 A.D.: The New World

RATING **5** **Price:** \$89.95 **Contact:** Electronic Arts
Phone: (02) 9264 0175 **Web:** www.1503ad.com
Classification: G(8+) ✓ A remarkable cure for insomnia
 ✓ Some strategic depth ✗ Dated visuals ✗ Astonishingly dull ✗ Unwieldy interface

1503 A.D.: The New World (1503) is a real-time/empire-building strategy hybrid. You start with a single ship and set sail for distant lands in an attempt to build a vast empire. Sound exciting? I wish.

Unlike most RTS games, 1503 is pretty damned slow. At the start of the game, you scout out islands, exploring their agricultural or mining potential. This involves assessing variables like terrain type, climate zones, and other geographical factors. Once you decide on a suitable location for your initial colony, you begin the process of construction and expansion. Like most empire-style strategy games, this involves building roads, houses, market stands and so on. As your population grows, you need to constantly monitor the needs of your citizens.

The basic aim of 1503 is to advance your civilisation through five levels of development: Pioneers, Settlers, Citizens, Merchants and Aristocrats. In the process, you'll need to keep an eye on operating costs, and use either diplomacy or military might to conquer rival civilisations while generally trying to keep your citizens happy.



The graphics of 1503 are fairly primitive — a far cry from the sort of visual splendour RTS fans have come to expect with games like Command & Conquer: Generals or Warcraft III. The game's audio is also fairly rudimentary and the voiceovers downright annoying. A fairly cumbersome interface only compounds these problems further. To make matters worse, 1503's combat system feels like an afterthought, lacking even the most basic features found in other RTS games (decent path-finding AI, for example). In fact, the game probably plays better if you ignore the combat component altogether, instead, focusing on diplomacy and trade. I guess what I'm really trying to say is that I found 1503 A.D.: The New World exceedingly dull.

Try this one before you buy.

Pity the game is so damned slow!

Cheesy monster mayhem: you gotta love it!

War of the Monsters

RATING **8** **Price:** \$99.95 **Contact:** Sony Computer Entertainment
Phone: 1300 365 911 **Web:** www.wotm-game.com **Classification:** M(15+) ✓ Great sense of humour ✓ Fun and accessible ✓ Colourful 3D visuals ✓ Loads of atmosphere ✗ Not particularly deep

I love a game with a cheesy sense of humour, and War of the Monsters (WOM) is just such a game. If you ever harboured a secret desire to control a gigantic, B-movie-style monster as it goes on a gleeful rampage of wanton destruction, here's your chance. The premise of WOM is simple: 30m tall monsters have invaded Earth, causing mass panic and laying waste to anything that stands in their way. You select from one of 10 monsters and then proceed to bash the bejesus out of buildings, cars, and other gigantic monsters.

At first, the game may seem overly simplistic but you'll soon discover that the depth of WOM lies not in the monsters themselves, but in the sprawling, highly interactive environments. Apart from levelling massive buildings with a few leisurely punches, your monster can also pick stuff up (buses, cars, steel girders and so on) and use it as a club or projectile.

The trick of the game is learning how to best exploit the buildings and objects around you. The levels contain a liberal sprinkling of power-ups, but you might have to smash everything in

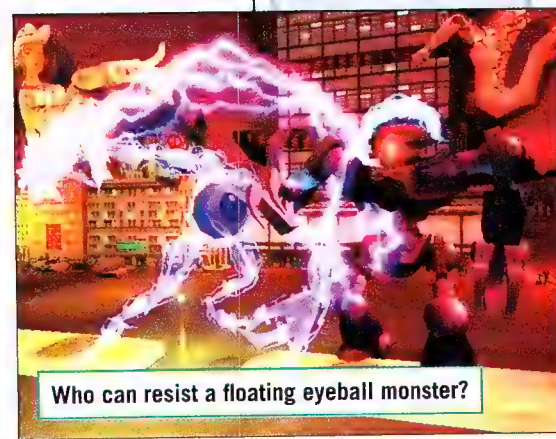
sight to find them. The third-person perspective visuals of WOM are crisp, colourful and chock-full of detail.

The monsters themselves are very endearing and move about the place with a hilarious degree of bravado and posturing (such as chest thumping and roaring). In terms of variety, WOM features all the classic monster archetypes: giant lizard, giant ape, giant robot, floating eyeball and so on.

If you have a soft spot for classic B-movie monster films, then War of the Monsters is a must-have. >>>



"Hey Mongo, let's go demolish another building!"



Who can resist a floating eyeball monster?

"Hmmm, kinda suspicious looking — bouffant hair, blue spandex . . . Hey, that's him!"

PS2 GAME REVIEW & PREVIEW

Metal Gear Solid 2: Substance

RATING **FA** **Price:** \$99.95 **Contact:** GameNation
Phone: 1800 060 605 **Web:** www.konami-europe.com
Classification: M(15+) ✓ **Loads of VR missions**
 ✓ **Extra 'Snake Tales' missions** ✓ **Amazing production values** ✗ **Stupid skateboarding mode** ✗ **Not enough extras**



Metal Gear Solid 2: Substance (MGSS) is essentially a re-release of the original Metal Gear Solid 2: Sons of Liberty with a few extras tacked on. MGSS was also released for the Xbox platform some time ago, and this made a lot of sense because the original game was exclusive to the PS2. However, my feeling is that any PS2 owners thinking of buying MGSS would already have had their fill of the original game, and this incarnation doesn't really offer enough in the way of extras to justify a second look.

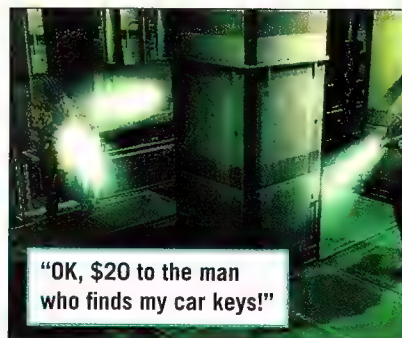
I reviewed the PS2 version of Metal Gear Solid 2 ages ago (see the June 2002 issue, page 133) so I won't

go into too much detail about the game itself.

Suffice to say, it's a highly cinematic 3D action game, with plenty of stealth and tactical combat elements thrown in for good measure.

Apart from the main game, MGSS also includes a bonus mode where you can skateboard around the place as one of the two main characters. This is actually kind of stupid and I can only imagine that some Konami programmer had way too much time on their hands. Of more interest are the loads of extra VR training missions, which let you experience every facet of MGSS without having to endure the longwinded cinematic sequences. MGSS also comes bundled with a DVD documentary covering the making of the game. For those of you who have already waded through the original, there are also a small number of extra missions which allow you to play as Snake.

If by some miracle, you happen to own a PS2 and haven't yet played Metal Gear Solid 2, then MGSS is a pretty good buy. But if you've already waded through Sons of Liberty, I'd give this one a miss.



"OK, \$20 to the man who finds my car keys!"

Primal

Contact: Sony **Phone:** 1300 365 911 **Web:** www.primalgame.com
Release date: June/July 2003

The odd couple.



Primal is a dark, moody 3D action game for the PS2. At the start of the game, Jennifer and her boyfriend Lewis are attacked by an unknown (but suspiciously demonic-looking) creature. In the struggle, Jennifer bangs her nonce and blacks out. When she wakes up, she finds that her consciousness has actually left her body (which lies prostrate in a hospital bed).

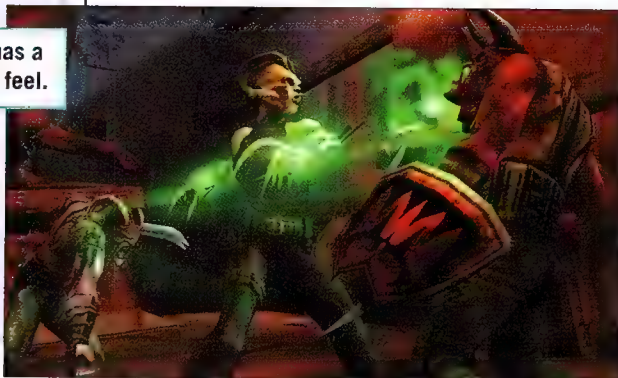
In this rather disturbing state, Jen encounters a stone gargoyle named Scree, who proceeds to tell her about four otherworldly realms: Solum,

Aquis, Aetha and Volcis. According to Scree, the natural balance of these realms has been disturbed and it's Jennifer's destiny to fix the problem.

In the game, you control the characters of Jennifer and Scree. While you can switch between the two at will, at certain points in the game you will have to specifically use one or the other in order to progress (ie. to pass a barrier or to rescue the other when they are in trouble). As a consequence, learning how to best exploit the inherent strengths and weaknesses of each character forms the backbone of the game. For instance, Scree's great mobility makes him a useful scout, while Jennifer's ability to morph into one of four demonic forms means she excels at combat.

With its evocative 3D visuals and dark soundtrack, Primal manages to generate some rather dark and disturbing atmospherics. On a more upbeat note, the game does feature some decent voice acting, which is fortunate considering the numerous and somewhat lengthy dialogue sequences. If you own a PS2 and have a penchant for Gothic-style action games, keep an eye out for Primal.

The game has a very Gothic feel.



Jennifer is half demon.

V-Rally 3

RATING **Price:** \$99.95 **Contact:** GameNation
Phone: 1800 060 605 **Web:** www.vrally3.com
Classification: G(8+) ✓ Comprehensive career mode
 ✓ Good damage modelling ✓ Slick visuals ✗ Twitchy handling ✗ Mediocre audio

V-Rally 3 (VR3) is another solid rally driving game for the Xbox platform. The developers have put the emphasis on realism and you race against the clock, rather than directly competing with other vehicles.

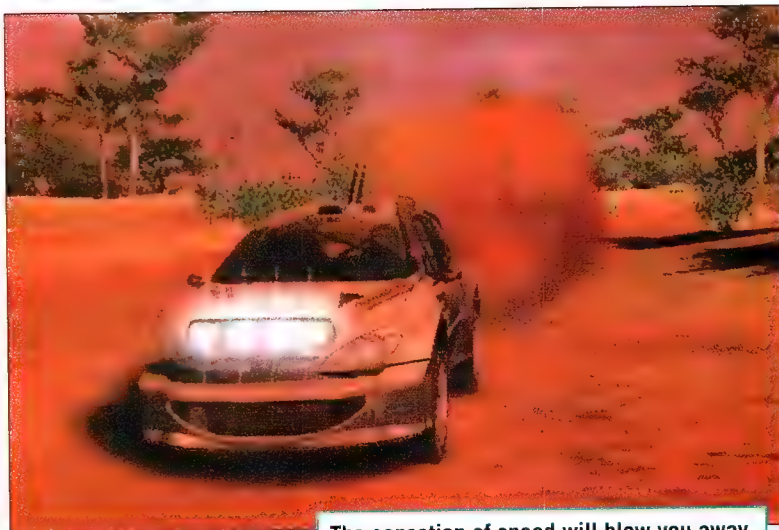
The game is split into three playing modes: V-Rally, Time Attack and Challenge. The latter two options are quick race modes, allowing you to get a dose of instant action. In Time Attack, you can race against a prerecorded ghost image of your own vehicle to improve race times (this is a great way to practise before embarking on a full-blown career in V-Rally mode). Challenge is a slightly more sophisticated version of Time Attack, where you compete in a series of three separate stages. Both Time Attack and Challenge are available for multiplayer sessions, supporting up to four players.

The heart of VR3 is career mode (or V-Rally mode), which is a little more sophisticated than most other rally driving games. You get to create your own driver from scratch, even customising things like appearance and nationality. You then embark on a season by getting a contract with a new team (if you played a season already you may just choose to renew your existing contract).

In a neat twist, you manage your career from an office. Using your in-game computer, you can check your email for team offers and even check out the latest competition news. Small details like this add a degree of authenticity to the game.

Once you land a contract, it's time to go racing. First-season players begin their career in a front-wheel drive 1.6L car. Of course, your eventual aim will be to get a shot at the elite four-wheel drive 2.0L category. VR3 features a hefty array of top-spec cars including the likes of the Subaru Impreza, Ford Focus and Peugeot 206. Of course, the make, performance and ongoing maintenance of your car depends on the budget of your racing team.

VR3 is quite a challenging game and it will take most players a while to hone their driving skills to



The sensation of speed will blow you away.

the point where they can start posting respectable times. While the game's physics engine is generally OK, handling can get a bit twitchy at times, particularly with the more powerful 2.0L cars. You can also tinker with a myriad of setup options to squeeze a little extra oomph or stability out of your car.

VR3 features loads of impressive detail and the designers have done a great job creating a variety of different terrain with visual effects. The cars themselves also look superb, and when they get knocked around it's reflected by some realistic damage modelling.

Most importantly, VR3 successfully generates a fierce sensation of speed and most players will feel their heart rate soar during the course of a race.

If you're an Xbox owner with a penchant for realistic rally driving games, then V-Rally 3 is a pretty safe bet. **PCU**



Wow, trees that actually look like trees!



Handling can get a bit twitchy.



How am I supposed to concentrate on driving with all this bloody picturesque scenery?

Hi-5 Fun Club

Gail Lipscombe
looks at some
great software
featuring
preschoolers'
favourite Aussie
TV characters.

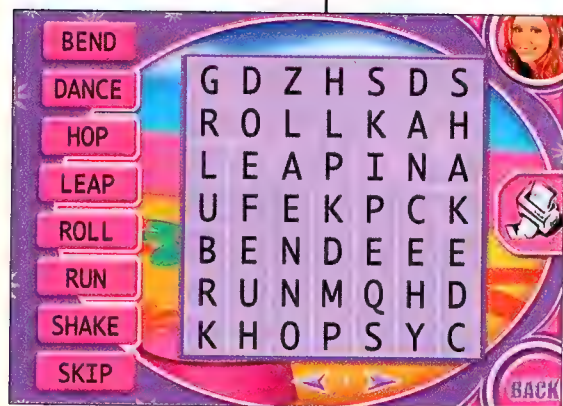
RATING  **Ages:** From three years **Price:** \$39.95
Contact: Dataworks **Phone:** (03) 9764 8344
Web: www.dataworks.com.au ✓ Female role models
✓ Great graphics and animation ✗ Flimsy packaging
out of the box

It's refreshing to see a group of kids' entertainers with some gender balance — not all-male outfits with the only females characters being animals in 'barrel girl' roles. The Hi-5 members, with their unique brand of kiddo pop, bring you six bright and bouncy activities in this title.

In the first, you can have fun solving jigsaw puzzles with Kathleen. Next, you can create your own cards and invitations with Nathan and then print them out. With Kellie, you search for treasure by following clues you'll find in the different pictures. You can choose to follow the easy clues, or if you like a bit more of a challenge, you can opt for the rhyming clues. Tim will help you to

learn to play four of your favourite Hi-5 tunes or you can use the keyboard to create your own musical masterpieces. You can also solve word puzzles with Charli by finding words that are hidden in a letter grid. To finish, there are three video stories (the punchline in 'Happy the Snail' is one of the reasons Hi-5 are also popular with parents).

The only problem with this CD-ROM is that once you take it out of the cardboard packaging, you're left with just a paper envelope for storage — not a very good plan for media that's likely to get a good workout by not-always-gentle preschoolers! All the other titles reviewed here have the same inappropriate storage arrangements.



Find these
'moving' words
in the letter grid.

The Hi-5 gang.



The Wiggles: Wiggle Bay

RATING  **Ages:** From three years **Price:** \$39.95
Contact: Dataworks **Phone:** (03) 9764 8344
Web: www.dataworks.com.au ✓ Great graphics
✓ Favourite characters ✗ Flimsy packaging

Love them or hate them, The Wiggles are huge with preschoolers. This title from the Wiggles is a lively romp through eight activities in typical Wiggles style. A couple of these activities, such as 'Spot the Difference with Greg' and 'Grow Flowers with Dorothy the Dinosaur', are a welcome change from the usual

preschooler fare. You can also hunt for the key to Davey Jones' locker in an activity similar to the treasure hunt in the Hi-5 title. Magdalena Mermaid needs some help to negotiate her way through a maze to get to the buried treasure, similar to the maze activity in the Hooley Dooley package. There's also a jigsaw activity that's similar to the one in the Humphrey Bear title, where you help Jeff solve a series of jigsaw puzzles featuring Wiggles characters, ranging from four to 15 pieces. In another activity, you can make beautiful music with Henry the Octopus and his underwater band by using your mouse to play notes onscreen. You can also record your masterpieces (up to four tunes at any one time), then play them back to impress the family — you never know, it could be the start of a lucrative career.

Once again, the packaging is a disappointment, particularly as this software is sure to get heavy use. However, this title is the pick of a good bunch this month, and Wiggles fans won't want to miss it.



Outsmart Anthony
at tic tac toe.



FOR KIDS

after hours

Bananas in Pyjamas: It's Party Time

RATING **8** **Ages:** Two to six years **Price:** \$29.95
Contact: Dataworks Phone: (03) 9764 8344

Web: www.dataworks.com.au ✓ Quaint graphics

✓ Can play each activity as long as you like

✓ Old-world charm ✗ Inadequate packaging

It's nice to know that this B1 and B2 escaped the Pan Pharmaceuticals recall! B1 and B2 are joined by the teddies (Lulu, Morgan and Amy), Tolstoy the Turtle and Rat in the Hat for five fun activities that will develop mouse skills, hand/eye coordination, reflexes, observation, memory, creativity, sequencing



Test your memory with this shell-matching game.

and problem-solving skills. The activities play on and on, so it caters for the full range of attention spans.

In the woods, you have to spot the hiding teddies and click on them to catch them. In the next activity, you have to help Tolstoy pick the right path through a maze of paths to get to a particular object. At the beach, you can make Lulu dance using your mouse and test your memory in the shell game. At Cuddles Avenue, you can play music with the One Rat Band and at the birthday party, you can make weird and wonderful pizza combinations. In the shop, use your powers of observation to duplicate the features on one mask onto another so that B1 and B2 have identical masks for the party. There is also a bonus fun pack where you can colour in line drawings onscreen or print them out to do away from the computer, and you can make your own party invitations. This fun little program will entertain fans of the TV show and develop valuable skills. >>>



Can you spot Lulu hiding in the woods?

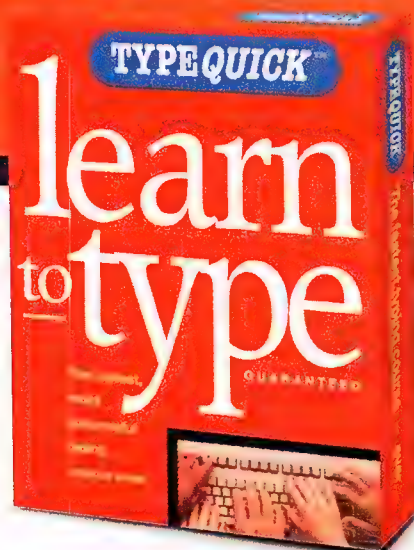
How to increase your return on IT investment...

Can you measure the return on your IT investment? With 90% of today's business documentation being electronic and only 20% of employees able to touch-type properly, software applications are not being used effectively. Can your business afford this? There is a simple, yet effective solution!

TypeQuick Courseware. Simply increase your staff's keyboard efficiency to 35wpm and your PC productivity could increase between 40% to 90%, justifying your investment in hardware and software. Imagine the real impact this could have on your business's bottom-line.

Call us today to find out how our proven SME solutions increase work output without increasing salaries.

Telephone 1800 808 078 OR 02 8467 9777



www.typequick.com.au

Open Wide, Come Inside — It's Play School

Wheels of the bus



Is there a person on the planet who won't be singing along with 'The Wheels of the Bus'?



The Jack in the Box activity will develop mouse skills and hand/eye coordination as you burst party balloons and chase escaping objects and put them back in the box. As you add new people, animals and bus bits to the bus in the Wheels of the Bus activity, you add another verse to the famous song. In Nursery Rhyme Dress Ups, you

RATING Ages: Two to six years
Price: \$29.95 **Contact:** Dataworks Phone: (03) 9764 8344
Web: www.dataworks.com.au
 ✓ Familiar characters ✓ Accessible for the very littlies ✓ Clean, uncluttered graphics ✗ Can't see six-year-olds sticking with it

Play School spans the generations, and in this great software package, you'll hear the voice of Noni Hazelhurst, one of the show's stalwarts. Of all the titles reviewed this is the most accessible for the very littlies.

Nursery rhyme dress ups



Dress up the nursery rhyme characters in their correct clothing to hear the song.

dress characters in their correct clothes to see the animated nursery rhyme and hear the song. In the next activity, you hear the tale of Tiddalik, the frog who drank all the rivers and waterholes dry. You then try to get the other animals to make him laugh to return the water to where it belongs. In the final activity, you navigate a boat through a maze of canals by opening and shutting the gates to get it to the harbour.

Very young fans will love the familiar feel of the TV program in this title, but six-year-olds might feel they're a bit past it.

The Hooley Dooleys: Oopsadazee

Guide Russell the kangaroo through the maze so he can reach Tickle.



RATING Ages: From three years **Price:** \$19.95
Contact: Dataworks Phone: (03) 9764 8344
Web: www.dataworks.com.au ✓ Vivid, appealing graphics ✓ Good value for money ✓ Should appeal to Wiggles fans ✗ Inadequate packaging for preschoolers

Antoine, Bruce and David, better known as the Hooley Dooleys by the preschool set, take you through six games in this title, with a little help from their friends Russell the kangaroo and Tickle the 'doodat' (which is a bit like a cross between a possum and a koala, only purple!). The games develop memory, listening, observation, creativity and problem-solving skills as well as hand/eye coordination.

In the first of Antoine's two games, you have to dress and accessorise Tickle. You can then print out your fashion masterpiece. In the second game, you help Russell navigate his way through a maze to reach Tickle. The mazes become more complex as you progress. In Bruce's activities, you sing along to your favourite Hooley Dooley songs and play tic tac toe. In David's

first activity, you can either colour in a picture onscreen and print out your creation, or print out the line drawing and complete it away from the computer — great for kids on long car trips. In David's second activity, you use your memory to match pairs of cards. As you work your way through the puzzles become harder, because you're given more cards to remember.

If you're a Wiggles fan, it's odds on that you'll like this lesser known Australian trio. **PCU**



Try to outsmart Bruce in a game of tic tac toe.

"Sometimes your spell checker just won't cut it."*

If you have ever been second-guessed by your word processor's spell checker, or just can't get one with an Australian spelling base, you'll know that the only solution is to reach for a dictionary.

"What's the difference? A dictionary won't just give you correct spellings; it provides you with all the meanings of a word and thereby helps you select the correct word. A spell checker helps you spell the word, but it doesn't help you select the right word."

MICROSOFT COMMUNIQUE

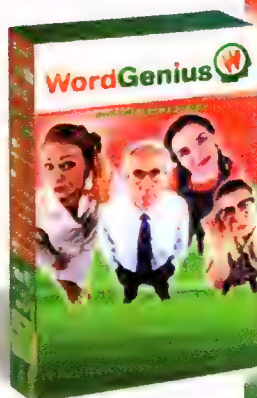
Eurofield Information Solutions, has solved the problem of having to stop what you're writing to dig around for that dog eared copy you kept from high school, or to spend hours searching the web.

The WordGenius integrates the official government-endorsed dictionary; the Australian Macquarie Concise Dictionary into all your PC Windows based applications, including MS Word, your web browser and email programme. You can simply drag words from the application to the WordGenius Drag-on icon as you compose documents and a window will then open with the definition and its pronunciation.

If you're still unsure how a word is pronounced, run your cursor across its phonic pronunciation and, as it passes over each syllable, the program will not only pronounce the sounds but it will also display the equivalent sounds from commonly used English words to give you a hand, ideal for anyone learning English.

The WordGenius has a very fast and powerful searching ability, allowing you not only to search for meanings, but you can also search the definitions for synonyms and you can check how a word is spelt by replacing single letters with a question mark (?) or multiple characters with an asterisk (*) in the search query. This search feature will be a godsend to lovers of crosswords and other word puzzles, — no more hanging by your fingernails waiting for the solution in the next issue of the magazine or newspaper.

This award winning powerful tool will be an asset to anyone reading or writing on a PC. Best of all, it uses all Australian spelling and contains Australian colloquialisms.



Whatever
you do **don't**
be lost
for words

Become a
WordGenius

The essential
tool for reading and
writing on a PC

- Incorporates the Macquarie Dictionary
- Very fast, convenient and simple to use
- Search for words and get instant definitions
- Provides slang dictionary meanings
- Thesaurus like functions
- Includes Audio Pronunciation Assistant

Try the Award Winning
WordGenius
for
FREE!

The CD-ROM on the cover provides you with full access to the **WordGenius** for 30 days.

For more information go to
www.wordgenius.com.au
OR Call 1300 889 978

WordGenius

Techware

The **PC User** team tests the latest gear.

Sony MPD-AP20U

RATING  **Price:** \$699 **Contact:** Sony **Phone:** 1300 137 669
Web: www.sony.com.au

Sony's new portable MPD-AP20U CD-RW/DVD-ROM drive could have been brilliant — it's just a pity it's not.

It connects to your PC or notebook's USB port, allowing you to burn CD-R/RW discs and play back DVD-ROMs. And it also doubles as a portable CD music player, with a remote control and earphones. The problem is it could have been much more.

The MPD-AP20U includes a cradle that enables you to supplement the fixed internal Lithium Ion battery, with eight AA cells for longer running times. Had Sony thought about it, including S-Video and composite-video output ports could have easily turned this

into a portable DVD movie player. You can't swap out the Lithium Ion battery, hence the cradle, and if you lose the remote control, you can't use it as a music CD player either.

This could have been a great little unit, but as it is, it's underplanned and overpriced.

— Darren Yates



Mustek DV3000

RATING  **Price:** \$399
Contact: Natcomp
Technology Phone: (02) 9712
0099 Web: www.mustek.com.tw

The new Mustek DV3000 looks as though it has been lifted directly out of a spy movie, offering a fold-out 1.5in TFT LCD screen and measuring just 4 by 6.5 by 7.5cm. The compact unit enables you to shoot video and still images,

and it can also be used as a Webcam. The kit includes a wrist strap, carry pouch and 32M SD memory card.

When tested for still images, its outdoor image quality was comparable to that of other entry-level 2.1-megapixel cameras. However, it lacks a built-in flash, and the indoor shots were poor. The quality of movies recorded was also fairly pixelated. The Mustek DV3000 would not up to be scratch for recording anything important.

At \$399, the DV3000 seems to be \$100

overpriced, especially when the overall build and feel is that of a toy. To some, it may be a cool gadget to carry around and show off, but it's definitely not a replacement for a high-quality digital camera or camcorder.

— Joshua Rodriguez



iRemote

RATING  **Price:** \$299 **Contact:** MicroGram
Computers Phone: (02) 4389 8444
Web: www.microgram.com.au

Being classified as a couch potato is not an attractive thought, so why not up the ante and be a stylish couch king instead, by unifying all your audiovisual component remote controls into a single control unit.

The iRemote is a programmable unit that offers a large blue backlit LCD touchscreen, enabling you to command up to 16 audiovisual

components. Configuring the iRemote is made easy using the unit's learning eye, which allows you to transfer an existing remote control button command via infra-red. The unit also allows the programming of onscreen buttons and macro functions.

The unit demonstrated excellent transmission range and touchscreen feedback during testing, but navigating through 16 templates requires some getting used to. Although expensive at \$299 (including a stand), it's a fantastic tool for any lounge lizard.

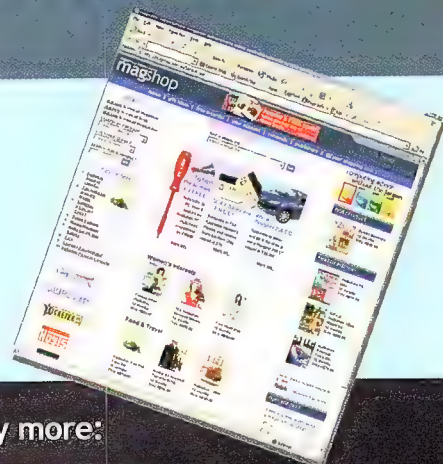
— Joshua Rodriguez **PC U**

magazines-books-more

magshop.com.au

subscribe online
www.magshop.com.au

Subscribe to your favourite magazines,
buy cookbooks, renew subscriptions,
or send a gift anywhere in the world.



www.magshop.com.au features these great magazines and many more:



Subscribing or buying online with magshop offers...

- ⇒ safe and secure online transactions
- ⇒ easy, quick and convenient subscriptions
- ⇒ discounts available on many titles
- ⇒ cookbooks and merchandise
- ⇒ free delivery for subscriptions anywhere in Australia

visit **magshop.com.au** now!

shop wise

Buying is easy, returning isn't

Paul Zucker
shares his
experience
of returning a
product without
the receipt.

Like most of you, I love buying a new gadget, but the last thing I think about is what I'll do if anything goes wrong with said gadget. I know that some *PC User* readers are very methodical and read every word on the warranty card, and meticulously file everything away, but many of us simply assume that everything will be OK.

Deciding that my new digital camera warranted a lightweight tripod, I shopped around the city one day and finally found an inexpensive yet lightweight model which seemed perfect — a good compromise between bulk and stability. However, when I got home and unpacked the boxed product (I had tested the display model) I discovered that it had a manufacturing fault — two of the locking pins had not been installed during manufacture, so one leg would not lock in place.

There was no warranty certificate, but I didn't really expect one for such a simple product. I packed everything back into the box so I could take it back to the shop for replacement. I had bought it from a camera shop that is part of a chain around NSW.

About a week later, my wife decided to visit

another shopping centre where there is a shop from the same chain, so I asked her to get the shop to swap the product for a good one. I couldn't find the receipt (probably thrown out with the plastic bag I carried the tripod home in), but since the shop's price sticker was on the box, and that particular tripod was stocked by all the shops in the chain, I had no reason to think that they wouldn't happily swap the product for a good one. After all, I wasn't after a refund or even an exchange for a different model.

I was surprised to find that my wife had been given short shrift by the salesperson she approached. Without a receipt, there was nothing they would do. They weren't interested in the fact that the product was sold in a faulty condition.

Undeterred, we went back to the shop where we'd bought the tripod. It was now about three weeks since the purchase. This time, I had my wife wait outside the shop until I was speaking to the salesperson. I beckoned her inside with the box and explained the situation to the salesperson. I was ready for a fight, I'm afraid, and I was not disappointed.

When the salesperson gave me the official "no receipt, no exchange" line, I tried to counter with "but I don't want a refund, I just want the working product that I paid for". After another couple of minutes of arguing back and forth, I was seeing red and I did a silly thing. Turning to the person next in queue behind me, I said "I wouldn't bother shopping here if I were you. They obviously don't stand behind the quality of the goods they sell."

At this point, the salesperson announced that he would call security and have me thrown out of the shopping centre. However, at that moment, the store manager returned to the shop and listened to my story. He reiterated the store policy, paused to tell the just-arrived security officer that he wasn't required, and eventually, grudgingly exchanged the product for a working model, though only to put an end to the scene.

The next business day, I rang the operations manager of the chain to find out more about this 'policy'. I later spoke to the general manager of a competing chain, and got much the same story. I was told by both that this is a cutthroat business, and the biggest enemy is the dishonest customer. I was told that some people will walk through the shop, pick up an item and then ask for a cash refund on something they have not even bought. Or there is the '\$0 rental', where someone will buy something on Friday, use it over the weekend, and take it back for a refund on Monday.

What's the lesson to be learned? Always keep your receipts — and don't assume that the shop you buy from is as trusting as you. **PCU**

Illustration: Getty Images



AUSTRALIAN COMPUTER RECYCLERS

1300 727 787



acr

221 BOUNDARY RD MORDIALE VIC 3195 www.pcrecyclers.net

direct

TO PUBLIC



SAVE \$200

ONLY \$449 incl GST

The PC Intro

- Intel Pentium III 233/266MHz
- 64MB RAM, 2.1GB HDD
- CD ROM and Floppy Drive
- Integrated Sound Card & 12W Speakers
- Integrated Video Card
- Refurb 14" SVGA Monitor
- Keyboard & Mouse
- Windows 95 supplied and installed

BONUS SOFTWARE



Valued at \$200



SAVE \$180

ONLY \$649 incl GST

The Kid's PC

- Intel Pentium III 450 MMX
- 128MB RAM, 6.4GB HDD
- CD ROM and Floppy Drive
- PCI Sound Card & 120W Speakers
- Video Card
- Refurb 15" Digital Monitor
- Keyboard and Mouse
- Windows 98 supplied and installed

6 BONUS SOFTWARE TITLES



Valued at \$300



SAVE \$400

ONLY \$899 incl GST

BONUS CARRY CASE

Acer Extensa Notebook

- Pentium 266MMX CPU
- 56K Modem
- 12.1" TFT Display
- 3.2 GB Hard Disk Drive
- 20x CD-ROM Drive
- 64 MB SDRAM
- One Month Big Pond Access FREE
- Win 95 supplied & inst



SAVE \$220

ONLY \$749 incl GST

Student Special

- Intel Pentium III 450 MMX
- 128MB RAM, 8.4GB HDD
- CD BURNER and Floppy Drive
- Integrated Sound Card & Integrated Speakers
- Integrated Video Card
- Refurb 15" SVGA Monitor
- 56k Internal Modem
- Keyboard and Mouse
- Windows XP Home supplied/installed
- One Month Big Pond Access FREE

7 BONUS SOFTWARE TITLES



Valued at \$400



SAVE \$300

ONLY \$849 incl GST

Internet Special

- Intel Pentium III 500 MMX
- 128MB RAM, 20GB HDD
- CD ROM and Floppy Drive
- Integrated Sound Card & 120W Speakers
- BMB Video Card
- Refurb 17" Digital Monitor
- 56k Internal Modem
- Keyboard and Mouse
- Windows XP Home supplied and installed
- One Month Big Pond Access FREE

7 BONUS SOFTWARE TITLES



Valued at \$400



SAVE \$300

ONLY \$1499 incl GST

BONUS CARRY CASE

Dell Latitude CPx Notebook

- Pentium III 500MHz CPU
- 192 MB RAM
- 14" TFT Screen
- 24 x CD ROM
- 12GB HDD
- USB port
- 56K PCMCIA Modem
- One Month Big Pond Access FREE
- Windows 98
- Apple Works Suite



SAVE \$150

ONLY \$999 incl GST

Home Business PC

- Intel Celeron 1.2GHz CPU
- 128MB RAM
- 20GB HDD
- CD ROM
- Floppy Disk Drive
- Video Card
- Refurb 17" Digital Monitor
- 56k Internal Modem
- Keyboard and Mouse
- New Mid Tower case
- Windows XP Home supplied and installed

BRAND NEW

7 BONUS SOFTWARE TITLES



Valued at \$400



SAVE \$500

ONLY \$1499 incl GST

BRAND NEW

The Entertainer

- Intel Pentium 4 2.4GHz CPU
- 256MB RAM, 40GB HDD
- DVD ROM with Power DVD software
- CD BURNER with software
- Integrated Sound Card
- Active Cansing Subwoofer Speaker System
- Integrated 128MB Video Card
- 10/100 Network Card
- 56k Internal Modem
- Refurbished 17" Monitor
- Deluxe Internet Keyboard
- 900MHz Cordless Mouse
- Decor Mid Tower Case
- Windows XP Home supplied & installed
- One Month Big Pond Access FREE

7 BONUS SOFTWARE TITLES



Valued at \$400



SAVE \$400

ONLY \$2699 incl GST

BONUS CARRY CASE

BRAND NEW

Intellipad 2.4 GHz Notebook

- Pentium 4 2.4GHz CPU
- 512MB RAM
- 40GB Hard Disk Drive
- 15" XGA TFT Display
- DVD, CDRW
- Internal 64MB Graphics
- 10/100 Network Card
- 56K Modem
- Infrared Capable, TV out
- One Month Big Pond Access FREE
- Win XP Home supplied & installed

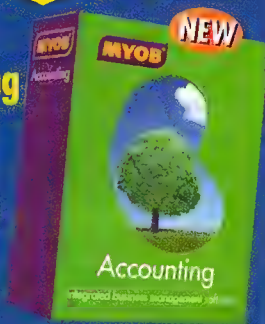
While great care is taken in compiling the specifications and information for this advert, it is the nature of our business and the industry that product price and availability is constantly changing. Prices, titles and models may change without notice. Call our friendly sales staff for the latest updates and prices. E & O.E.

Order Online: **CORPSOFT**
.COM.AU

New Toll Free Order Line:
1300 SOFTWARE
 1 3 0 0 7 6 3 8 9 2

Financial Year Specials

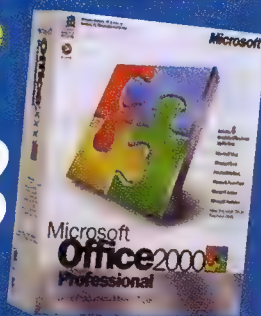
• **MYOB Accounting Version 13**
\$289
Accounting Plus \$499
While stocks last



• **Microsoft Publisher 2000**
\$99
While stocks last



• **MS Office 2000**
 NNew Install
 Pro **\$699**
 Std **\$499**
While stocks last
 † Upgrade bundled with competitive product



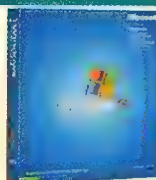
• **Goldmine Version 5**
\$150
While stocks last



CorpSoft POPULAR BUYS

Windows XP Pro

N/Install **\$445**
 Upgrade **\$405**



Easy CD & DVD Creator

Burn your entire world onto CD or DVD
\$120



CorelDraw GraphicsSuite V11

N/Install **\$1025**
 Upgrade **\$489**



ABC-Igrafx Flowcharter 2003

N/Install **\$499**
 Upgrade **\$249**



Small Business Win SPECIALS

MS Visual Basic Pro V6

N/Install **\$899***
 *Bonus: inc. FREE MSDN Library
 SPECIAL OFFER FOR MS OFFICE PRO USERS
 Version 6 **\$699** Version 5 **\$399**



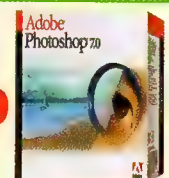
Microsoft SQL Server 2000 + 5 Clients

N/Install **\$2700**



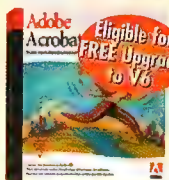
Adobe Photoshop Version 7

N/Install **\$1299**
 Upgrade **\$429**



Adobe Acrobat Version 5

N/Install **\$470**
 Upgrade **\$270**



CorpSoft SPECIALS LIST

Adobe Photoshop Album NEW! ...	\$89	MS Small Business Server 2000	\$2749
Adobe Photoshop Elements V2	\$169	MS Windows 98 2Ed - Upgrade	\$230
Adobe Publishing Collection V13 ...	\$2290	MS Windows ME - Upg (from 98).....	\$115
ACT! Version 6 - NEW!	\$225	MS Win Server 2003 +5 Clients	\$1695
Crystal Reports Professional V9	\$729	MS Word 2000 - Special !!	\$375
Dragon Nat. Speaking Pref V7	\$349	Norton Internet Security Std 2003.	\$99
Macromedia Dreamweaver 4	\$575	OmniPage Pro V12 N/Install.....	\$880
MS Project 2000 - Upgrade.....	\$525	OmniPage Pro V12 Upgrade	\$320
MS Project 2000 - New Install.....	\$995	Partition Magic Version 8	\$119
MS Publisher 2002 - Upgrade	\$199	WinZip V 8.1 - 1/10 users	\$75/\$520

- **Call for our full Academic Price Range**
- **We guarantee to beat any genuine competitor's price**

PLEASE NOTE: • Delivery: Post \$11.50 or Courier \$15.90 • We accept Bankcard Mastercard and VISA, but not AMEX or Diners. COD welcome.
 • Phone, Fax and Mail Orders Welcomed • Goods ordered in error incur a 15% restocking fee • We Accept authorised returns for Credit within 10 days if goods are unopened and in saleable condition • Moneyback Offers (if any) are the responsibility of the manufacturer • E & O.E. • All Prices are Subject to Change Without Notice • Images shown are for illustration purposes only • Artwork prepared May 22nd - prices advertised are GST inclusive. 7/03



CORPORATE SOFTWARE
AUSTRALIA PTY LIMITED
 PHONE: (02) 9725 3700
 FAX: (02) 9604 1983

Unit 1, 28 Victoria Street, Smithfield NSW 2164 • PO Box 6168, Wetherill Park NSW 2164

Order Online: **CORPSOFT**
.COM.AU

New Toll Free Order Line:
1300 SOFTWARE
 1 3 0 0 7 6 3 8 9 2

Microsoft OFFICE CLEARANCE

Special Bonus

MS Office XP Pro

New Install

\$799

• **HURRY !!** – Offer ends July 15 or while stocks last



MS Office 2000
 Std Upgrade or Crossgrade **\$330**
 Pro Upgrade or Crossgrade **\$499**

ATTENTION OWNERS OF:
 MS Works, Lotus 123, SmartSuite, WordPerfect, Word, Excel – are eligible to purchase these at upgrade prices. (Conditions apply)

MS Office XP Std Upgrade \$330

MS Office XP Pro Upgrade \$499

(Upgrade from Office 97/2000 only)



CorpSoft NEW FOR 2003

Paintshop Pro Version 8

N/Install **\$229**

Upgrade **\$129**



Adobe Acrobat V6

Std N/Inst Std Upg **\$570 \$229**

Pro N/Inst Pro Upg **\$870 \$329**



Nortons CLEARANCE SALE

AntiVirus 2003
 For Windows XP

1-User **\$80**

5-User **\$240**

• Includes first 12 months virus updates

WinFax Pro Version 10.02

N/Install **\$95***

*Limited stocks, everybody qualifies



AntiVirus 2001
 For Win95/98/NT/2000/ME

1-User **\$59**

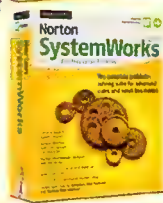
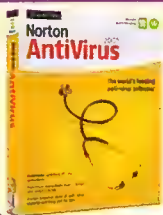
10-User **\$440**

• Includes first 15 months virus updates

SystemWorks Pro 2003

N/Install **\$110***

*Limited stocks, everybody qualifies



Found a Better Deal? We guarantee to beat any genuine competitor's prices!

NEW TOLL FREE ORDER LINE:
1300 SOFTWARE
 1 3 0 0 7 6 3 8 9 2

Phone (02) 9725 3700 • Fax (02) 9604 1983

CorpSoft Bonus Deals

• **Adobe InDesign 2.0**

\$1250

BONUS: FREE
 Microsoft X-Box or Playstation 2

*Limit of one console per customer - while stocks last

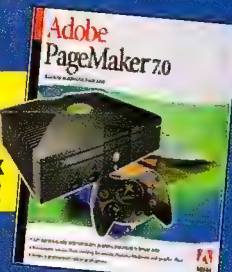


• **Adobe Pagemaker 7**

\$1150

BONUS: FREE
 Microsoft X-Box or Playstation 2

*Limit of one console per customer - while stocks last

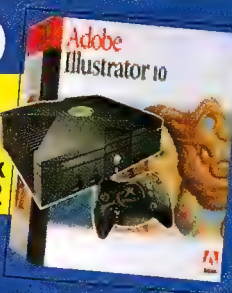


• **Adobe Illustrator 10**

\$1050

BONUS: FREE
 Microsoft X-Box or Playstation 2

*Limit of one console per customer - while stocks last



• **MS FrontPage 2002**

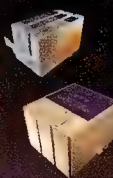
\$330

BONUS: FREE
 Publisher 2002



100% AUSTRALIAN OWNED
 Over 16 years in operation

TM SUPERIOR PERFORMANCE **INKJET CARTRIDGES** **CLICK IN & SAVE UP TO 60% OFF PRINTING COSTS**



CANON COMPATIBLES FROM \$6.00

Code	OEM Equivalent	Compatible With:	Price
CC-1BK	BJI-642	BJ-300/330 Black	\$12.00
CC-2BK	BJI-201BK	BJC-600/610/620 Black	\$6.00
CC-3BK	BJI-643BK	BJC-800/820 Black	\$12.00
CC-4BK	BCI-21	BJC-2000/4000/5000 Series Black	\$7.00
CC-5CL	BCI-21C	BJC-2000/4000/5000 Series 3-Colour	\$12.00
CC-6BKHC	BJI-201BK HC	BJC-600/610/620 Hi-Cap Black (14ML)	\$9.00
CC-7BK	BCI-10	BJ-30 Black	\$9.00
CC-8BK	BCI-11	BJC-70 Black	\$9.00
CC-9CL	BCI-11C	BJC-70 3-Colour	\$17.00
CC-11CL	BCI-61	BJC-7000 Series 3-Colour	\$32.00
CC-12PCL	BCI-62 PHOTO	BJC-7000 Series Photo 6-Colour	\$38.00
CC-13B	BCI-3	BJC-6000 Black	\$25.00
CC-14C	BCI-3C	BJC-6000 Cyan	\$16.00
CC-15M	BCI-3M	BJC-6000 Magenta	\$16.00
CC-16Y	BCI-3Y	BJC-6000 Yellow	\$16.00
CC-17PBK	BCI-3PBK	BJC-6000 Photo Black	\$18.00
CC-18PC	BCI-3PC	BJC-6000 Photo Cyan	\$18.00
CC-19PM	BCI-3PM	BJC-6000 Photo Magenta	\$18.00

100% COMPATIBLE WITH YOUR CANON PRINTER



BUY 3 GET 1 FREE*
*Free cartridge must be of equal or lesser value than the lowest priced cartridge purchased



FREE DELIVERY AUSTRALIA WIDE



EPSON COMPATIBLES FROM \$17.00

Code	OEM Equivalent	Compatible With:	Price
CE-51BK	SO20025	STYLUS 800/1000 Black	\$16.00
CE-52BK	SO20034	STYLUS Colour/Colour Pro Black	\$20.00
CE-53CL	SO20028	STYLUS Colour/Colour Pro 3-Colour	\$30.00
CE-54BK	SO20047	STYLUS 200/820/Colour II /IIs Black	\$13.00
CE-55CL	SO20049	STYLUS 200/820/Colour II /IIs 3-Colour	\$21.00
CE-56PBK	SO20093	STYLUS Colour 800/850/Photo Black	\$17.00
CE-57CL	SO20097	STYLUS Colour 200/500 3-Colour	\$23.00
CE-58BK	SO20108	STYLUS Colour 400/600/800/1520 Black	\$17.00
CE-59CL	SO20089	STYLUS Colour 400/600/800/1520 3-Colour	\$23.00
CE-60PCL	SO20110	STYLUS Colour 700/Photo/Photo 700 5-Colour	\$26.00
CE-61BKCL	SO20138	STYLUS Colour 300 4-Colour	\$31.00
CE-65BK	SO20187	STYLUS Colour 440/640/660 Black	\$16.00
CE-66BK	SO20189	STYLUS Colour 740/760 Black	\$16.00
CE-67CL	SO20191	STYLUS Colour 440/640/660/740/760 3-Colour	\$26.00
CE-68PCL	SO20193	STYLUS Photo 750 5-Colour	\$33.00
CE-69CL	T003011	STYLUS Colour 900 Black	\$19.00
CE-70CL	T005011	STYLUS Colour 900 Colour	\$24.00
CE-71PCL	T001011	STYLUS Photo 1200 5-Colour	\$29.00
CE-27BK	T007	STYLUS Colour 870/1270 Black	\$24.00
CE-73CL	T008	STYLUS Colour 870 Colour	\$29.00
CE-74CL	T009	STYLUS Colour 1270 Colour	\$34.00

100% COMPATIBLE WITH YOUR EPSON PRINTER



BUY 3 GET 1 FREE*
*Free cartridge must be of equal or lesser value than the lowest priced cartridge purchased

New Reality's compatible inkjet cartridges will save you up to 60% when compared with the cost of original manufacturers cartridges.

Our cartridges are guaranteed to print as good if not better than the original. Just click them in and 'save'!

If you are not 100% satisfied with our cartridges return them and we will refund the full purchase price... guaranteed!



FREE CATALOGUE WITH EVERY PURCHASE

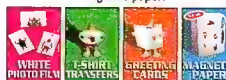
PAPER & MEDIA **SUPERIOR QUALITY AT AFFORDABLE PRICES**



Product Code	Description	Sheets	Price	Price per Sheet
A4HRP	A4 90gsm Hi-Res Paper	100	\$ 15.00	0.15
A3HRP	A3 90gsm Hi-Res Paper	100	\$ 30.00	0.30
A4WF	A4 White Film 100mu	50	\$ 47.00	0.94
A3WF	A3 White Film 100mu	50	\$ 90.00	1.80
A4CF	A4 Clear Film 100mu	50	\$ 39.00	0.78
A3CF	A3 Clear Film 100mu	50	\$ 71.00	1.42
A4FGP	A4 Full Gloss Photo Paper	50	\$ 44.00	0.88
A3FGP	A3 Full Gloss Photo Paper	50	\$ 79.00	1.58
A4PH	A4 Economy Photo Paper	50	\$ 23.00	0.46
AC2	Artists Canvas	25	\$ 60.00	2.40
GC4F	Greeting Card (4 Fold)	100	\$ 28.00	0.28
GCBF	Greeting Card (Bi-Fold)	100	\$ 48.00	0.48
DCCS	Double Coated Card Stock	50	\$ 24.00	0.48
GCS	Glossy Card Stock	50	\$ 24.00	0.48
TTP	T-Shirt Transfer Paper	15	\$ 15.00	1.00
MP	Magnetic Paper	25	\$ 58.00	2.32
BC1	Business Cards (10 per A4)	20	\$ 19.00	0.95



INCLUDES:
 90gsm coated paper, 90gsm hi-res paper, white film, clear film, full gloss photo paper, economy photo paper, greeting card (4 fold), greeting card (bi-fold), glossy card stock, t-shirt transfer paper, business cards and magnetic paper!



New Reality's Media and Paper supplies are guaranteed to be of the highest quality found world-wide and will meet the demands of today's printers including photo realistic output printers! If you are not 100% satisfied with our paper or media supplies return them and we will cheerfully refund the full purchase price... guaranteed!



www.newreality.com.au

AUSTRALIA WIDE FREECALL
1800 680 605



FREE AUSTRALIA WIDE DELIVERY! SAME DAY DISPATCH!!
COD * MONEY ORDER * CHEQUE * MASTERCARD * VISA * BANKCARD * AMEX



SUPERIOR PERFORMANCE INKJET REFILL KITS

REFILL & SAVE AT LEAST 80% OFF PRINTING COSTS

BLACK REFILL KITS FROM ONLY \$24.90

Black kits include superior, dense & sharp black inks

DESCRIPTION (Kits Compatible with Printers listed below)	No. of Refills	Product Code
CANON BJ-30	60	20-BKL
CANON BJC-70/BJC 80	60	21-BKL
CANON BC-01/02 BJ-10E/20 BJ-200 Series & BJC-1000 Series	9	3-BKL
CANON BJ-300/330	7	4-BKL
CANON BJC-600/610/620	16	5-BKL
CANON BJC-2000/4000/4100/4200/4300/4550/5000/5500 BCI-21	45	19-BKL
CANON BJC-2000/4000/4100/4200/4300/4550/5000/5500 BC-20	9	18-BKL
CANON BJC-3000/6000/8000 Series	12	46-BKL
HP Desk Jet 400/500 Series	6	8A-BKL
HP Desk Jet 600/660/690 Series	6	8B-BKL
HP Desk Jet 700/800/900/1000 Series	8	29-BKL
HP Desk Jet 300 Series & Olivetti JP's!	8	7-BKL
EPSON Stylus 400/800/800+/1000	8	1-BKL
EPSON Stylus Colour /PRO/XL	12	2-BKL
EPSON Stylus 820/colour II/III	12	23-BKL
EPSON Stylus Colour 200/300/400/500/600/800/850/1520	12	33A-BKL
EPSON Stylus Colour 440/460/480/640/660/700/740/760/900	12	33B-BKL
IBM/LEXMARK 4076/1000/1020/2000/2030/2050 Series	12	35A-BKL
IBM/LEXMARK 5000/5700/7000 & Z Series	12	35B-BKL
CANON, EPSON, HP Fluorescent & Photo Realistic Kits!		Please Call!

COLOUR REFILL KITS FROM ONLY \$34.90

Colour kits include cyan, magenta & yellow inks

DESCRIPTION (Kits Compatible with Printers listed below)	No. of Refills	Product Code
CANON BJC-70/80	3x30	22-CLR
CANON BJC-210/210SP/240/255/265/1000 Series	3x12	25-CLR
CANON BJC-600/610/620	3x8	10-CLR
CANON BJC-2000/4000/4100/4200/4300/4550/5000/5500 BCI-21	3x30	17-CLR
CANON BJC-3000/6000/8000 Series	3x8	47-CLR
HP Colour Desk Jet 300/400/500 Series & Olivetti!	3x12	14A-CLR
HP Colour Desk Jet 600C/660C/690C Series	3x12	14B-CLR
HP Desk Jet 850C/855C/870C/1000C Series	3x3	30A-CLR
HP Desk Jet 710/720/890/900 Series	3x3	30B-CLR
EPSON Stylus Colour /PRO/XL	3x4	16-CLR
EPSON Stylus 820/colour II/III	3x12	24-CLR
EPSON Stylus Colour 200/300/400/500/600/800/850/1520	3x12	34A-CLR
EPSON Stylus Colour 440/460/480/640/660/700/740/760/900	3x12	34B-CLR
IBM/LEXMARK 4076/1000/1020/2000/2030/2050 Series	3x6	36A-CLR
IBM/LEXMARK 5000/5700/7000 & Z Series	3x6	36B-CLR
CANON, EPSON, HP Fluorescent & Photo Realistic Kits!		Please Call!

Two printers not listed? No stock Australia's largest range of printer consumables. Call now!

USING NEW REALITY'S INKJET REFILL KITS WILL NOT VOID YOUR PRINTER'S WARRANTY.

New Reality Resources has no affiliation with any printer manufacturers or OEM's and nor has any arrangement been made with them to form the basis of any statements we make.



New Reality Resources Pty. Ltd. A/N - 073 908 013 Bayside Business Park
Australia Wide FREECALL - 1800 680 605 Shop 1 / 70 Redland Bay Rd
QLD Phone - (07) 3245 2411 Fax - (07) 3245 2755 Capalaba Q 4157
VIC Phone - (03) 9878 8288 Fax - (03) 9878 3933

Dealers wanted in all states and NZ!
For more information please call.

ALL PRICES INCLUDE GST

**AUSTRALIA WIDE FREECALL
1800 680 605**

All brand and product names are registered trademarks of their respective owners and used solely for descriptive purposes.

FREE AUSTRALIA WIDE DELIVERY! SAME DAY DISPATCH!!
COD * MONEY ORDER * CHEQUE * MASTERCARD * VISA * BANKCARD * AMEX



**BUY 3
GET 1
FREE**



**FREE
DELIVERY
AUSTRALIA WIDE**

**FREE
DELIVERY
AUSTRALIA
WIDE!**



Populaire

Antec SLK1600 Mini Tower
Gibabyte Mainboard
Integrated 6-Channel Audio & LAN
Gigabyte 64MB Radeon 9200 Video Card
512MB PC2700 DDR RAM
Seagate 80GB 7200RPM HDD
4KUS 52x24x52x CD-RW Drive
4KUS 16x DVD-ROM Drive
Panasonic 1.44MB FDD
D-Link 56K Internal Modem
Philips 19" CRT Monitor
Creative Desktop Speakers & Subwoofer
Logitech Keyboard & Optical Mouse
Microsoft Windows XP Home
Canon S200SPx Printer
Canon D646U ex Scanner

Athlon XP 2400+ \$1990
(Up to Athlon XP 3000+)
Pentium 2.4GHz \$2060
(Up to Pentium 4 3.06GHz)

Valeur

In-Win L545 Micro Tower
Gigabyte Mainboard
Integrated VGA, Audio & LAN
256MB PC2100 DDR RAM
Maxtor 40GB 5400RPM HDD
4KUS 52x CD-ROM Drive
Panasonic 1.44MB FDD
D-Link 56K Internal Modem
Philips 17" CRT Monitor
Stereo Desktop Speakers
Keyboard & Optical Mouse
Microsoft Windows XP Home

Athlon XP 2000+ \$990
(Up to Athlon XP 2400+)
Celeron 2.0GHz \$995
(Up to Pentium 4 2.4GHz)

Professionnel

Antec Sonata Midi Tower
Gibabyte Mainboard
Integrated LAN
128MB Radeon 9200 Pro Video Card
1GB PC3200 DDR RAM
Seagate 80GB 7200RPM HDD
Lite-On 52x24x52x CD-RW Drive
Lite-On 16x DVD-ROM Drive
Panasonic 1.44MB FDD
D-Link 56K Internal Modem
Mitsubishi 17" LCD Monitor
Creative I-Trigue 3300 Speakers
Logitech Navigator Duo
Microsoft Windows XP Home

Athlon XP 2400+ \$2995
(Up to Athlon XP 3000+)
Pentium 2.4GHz \$3190
(Up to Pentium 4 3.06GHz)

Joueur

Antec LANBOY Super Mini Tower
Gibabyte Mainboard
Integrated LAN
128MB Radeon 9700 Pro Video Card
1GB PC3200 DDR RAM
Seagate 120GB 7200RPM SATA HDD
Lite-On 52x24x52x CD-RW Drive
Lite-On 16x DVD-ROM Drive
Panasonic 1.44MB FDD
D-Link 56K Internal Modem
Mitsubishi 17" LCD Monitor
Creative Audigy 2 Sound Card
Creative Inspire 6600 Speakers
Logitech Navigator Duo
Microsoft Windows XP Home

Athlon XP 2400+ \$4160
(Up to Athlon XP 3000+)
Pentium 2.4GHz \$4395
(Up to Pentium 4 3.06GHz)

All prices as of 15/05/2003. Please check the latest prices at www.technomart.com.au

Intel P4 3.0GHz 800MHz FSB



\$840

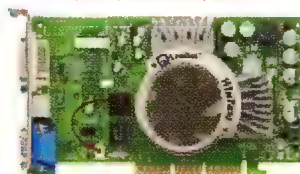
PROCESSORS

Intel	
P4 2.40GHz S478 533FSB	\$320
P4 2.53GHz S478 533FSB	\$365
P4 2.67GHz S478 533FSB	\$375
P4 2.80GHz S478 533FSB	\$500
P4 3.06GHz S478 533FSB	\$750
AMD	
Athlon XP 2400+ in Box	\$215
Athlon XP 2600+ in Box	\$315
Athlon XP 2700+ in Box	\$370
Athlon XP 2800+ in Box	\$475
Athlon XP 3000+ in Box	\$655

VIDEO CARDS

64MB		128MB	
Gigabyte R9500	\$305	Gigabyte R9800 PRO	\$1015
Gigabyte R9200	\$160	Gigabyte R9200VIVO	\$255
ASUS V9280 S2	\$385	ASUS V9900/TD	\$730
ASUS V9180 Magic/T	\$110	ASUS V9560/TD	\$395
Leadtek A280 LE TD	\$260	Leadtek A300 TD	\$740
Leadtek A180 MyVIVO	\$190	Leadtek A310 MyVIVO	\$475

Leadtek A310 TD MyVIVO 256MB
Massive 256MB DDR RAM, FX5600, TV-Out,
DVI,VIVO, Dual Head, AGP 8x



\$475

Altec Lansing XA3021



\$186

SPEAKERS

Creative	
SBS250	\$41
SBS370	\$60
I-Trigue 3300	\$192
Inspire 5100	\$180
Inspire 6600	\$246
Altec Lansing	
2100	\$206
5100	\$359
AVS200	\$44
AVS300	\$90
AVS500	125

MOTHERBOARDS

Pentium 4 / Celeron	
ASUS P4C800 Deluxe 800FSB	\$390
ASUS P4G8X Deluxe	\$385
ASUS P4PE Deluxe	\$275
ASUS P4XP-X	\$135
Gigabyte GA-8KNXP 800FSB	\$490
Gigabyte GA-8PENXP 800FSB	\$450
Gigabyte GA-8INXP1394	\$335
Gigabyte GA-8SIMLH-P	\$130
Athlon XP / Duron	
ASUS A7N8X Deluxe	\$280
ASUS A7V8X Deluxe	\$230
Gigabyte GA-7VAXP-A Ultra	\$255
Gigabyte GA-7VKMP	\$120



Gigabyte GA-7VAX1394-A
SA, KT400A, 333FSB,
DDR400, Dual BIOS,
IEEE 1394, LAN, Audio

\$180

SONY DRU510A

4XDVD+RW, 24XCD-R,
10XCD-RW, 8XDVD-
ROM, 32XCD-ROM



\$787

OPTICAL DRIVES

CD-RW Drives	
4KUS 52x24x52x	\$77
ASUS 52x24x52x	\$94
BenQ 52x24x52x	\$80
Lite-On 52x24x52x	\$80
Mitsubishi 52x24x52x	\$95
Sony 52x24x52x	\$100
DVD-ROM Drives	
4KUS 16x	\$62
ASUS 16x	\$76
BenQ 16x	\$65
Lite-On 16x	\$65
Mitsubishi 16x	\$75
Sony 16x	\$85

MONITORS

CRT Monitors		LCD Monitors	
17" BenQ V772	\$198	15" BenQ FP547	\$529
17" LG 700S	\$210	15" LG 1510S	\$595
17" Mitsubishi DV1770H	\$222	15" Mitsubishi DV154	\$595
17" Philips 107E	\$224	15" Philips 150S4FG	\$554
19" BenQ V991	\$353	17" BenQ FP767	\$830
19" LG 900B	\$372	17" LG 1710S	\$875
19" Mitsubishi DV1998e	\$378	17" Mitsubishi DV172	\$920
19" Philips 109S	\$405	17" Philips 170B4BG	\$975



Samsung SyncMaster 172W
17" LCD Monitor
16:9 Wide Screen, Analogue/
Digital Interface, Dual CPU
Input, 400:1 Contrast Ratio,
1280x768 Max Resolution,
Wall-mountable

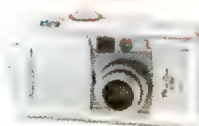
\$1282

CAMERAS

Canon	
PowerShot A200	\$282
PowerShot A300	\$425
PowerShot A40	\$510
PowerShot A60	\$515
PowerShot A70	\$595
HP	
PhotoSmart 320	\$290
PhotoSmart 620	\$398
PhotoSmart 720	\$530
PhotoSmart C850	\$1229
PhotoSmart C935	\$984

Canon S50

5.0 Mega Pixel,
3x Optical & 4.1x Digital
Zoom



\$1190

SOUND CARDS

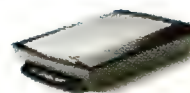
Audigy 2	\$227
Audigy 2 Platinum	\$428
Audigy 2 Platinum eX	\$517
SoundBlaster Live! DE 5.1	\$71
SoundBlaster Live! Platinum 5.1	\$246
Extigy	\$297

PRINTERS

Inkjet Printers		Canon ImageCLASS D680	
Canon i450	\$180	Digital Copier, Laser Printer & Fax all-in-one, 12cpm up to 1200x600dpi, 12ppm up to 2400x600dpi, 79 pages fax memory, 30-sheet Auto Document Feeder	
Canon i470D	\$354		
Canon i6100	\$524		
Canon i6500	\$692		
Canon i9100	\$1044		
Epson C41SX	\$126		
Epson C41UX	\$110		
Epson C61	\$177		
Epson C82	\$332		
HP DeskJet 3325	\$71		
HP DeskJet 3420	\$89		
HP DeskJet 3820	\$133		
HP DeskJet 5550	\$178		
Laser Printers			
Canon LBP-1120	\$375		
Canon LBP-1000	\$858		
Epson EPL-5900	\$604		
Epson EPL-6100L	\$470		
HP LaserJet 1000	\$452		
HP LaserJet 1300	\$777		

\$1202

SCANNERS



Canon CanoScan 8000F
2400x4800 dpi, 48 bit,
USB2.0, FARE
Technology, Film
Scanning,

\$525

Canon CanoScan	
LIDE20	\$134
LIDE30	\$197
LIDE50	\$224
3000F	\$266
5000F	\$352
Epson Perfection	
Photo 1260	\$219
Photo 1660	\$378
Photo 2400	\$468
Photo 3200	\$766
HP ScanJet	
3500C	\$178
3570C	\$265
4500C	\$399
4570C	\$430
5550C	\$879

Thin Client Terminals

A really nice, VERY small footprint computer utilizing the Eden 533 Mhz CPU and an ITX form factor motherboard. Requires hard drive, Memory and CD/DVD. A very compact desktop solution

Cat 1149-9 \$559

Cat 1150-9 This tiny and attractive embedded computer system will operate from a 12-volt supply making it ideal for mobile or remote location use **\$749**

Cat 1133-9 This very fast serial terminal has two high-speed 460K-baud serial ports. The provision of a Centronics port allows the connection of a standard parallel printer **\$549**

Cat 1134-9 A colour, Ethernet TCP/IP terminal designed for use in UNIX networking environments **\$579**

Cat 1144-9 A thin client terminal suitable for Linux using the LTSP (Linux Terminal Server Project) **see www.ltsp.org \$829**

Cat 1215-9 This is a Windows Based Terminal, integrated in an LCD monitor. It operates under Windows CE, and is suitable for both NT server and Unix host **\$2599**

Cat 1214-9 This is a Windows Based Terminal, operating under Windows CE, that is suitable for both NT/2000 server and Unix host. It supports both the Citrix ICA protocol as well as Microsoft's RDP **\$999**

Cat 1233-9 Remote management software for Windows Terminals **\$369**

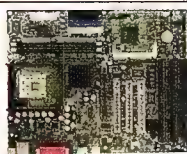


Training-OnLine

If you need a value-for-money training solution then check out this well established company. T.O.L. offers a comprehensive range of quality courses at prices that students will appreciate. On line now at.....**www.tol.com.au**

3 ISA Slots on a P4 Motherboard!

Don't throw away your ISA equipment-Upgrade to this fully featured P4 industrial ATX board **Cat 17078-9 \$999**



Cat 17078

THiNK outside the MOTHERBOARD



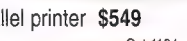
Cat 1149



Cat 1150



Cat 1133



Cat 1134

Low Profile PCI Cards

Cat 2866-9 USB 2.0 3 port 480 Mbps **\$89**

Cat 2837-9 1 port RS232 (serial) **\$85**

Cat 2850-9 1 port RS232 (serial) with re-mappable ports **\$109**

Cat 2838-9 2 port RS232 (serial) **\$99**

Cat 2839-9 4 Port RS232 (serial) **\$405**

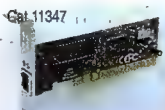
Cat 11347-9 Ethernet Card 10/100 **\$43**

Cat 2992-9 FireWire Card **\$99**

Cat 2840-9 Printer Card, 1 port **\$94**

Cat 2841-9 Printer Card, 2 port **\$123**

Cat 2842-9 2 x Serial, 1 x parallel Card **\$119**



Cat 11347



Cat 2840

Foreign Language Keyboards - \$69ea

Cat 8989-9 Chinese/US

Cat 8991-9 UK English

Cat 8994-9 French

Cat 8996-9 Czech

Cat 8992-9 Italian

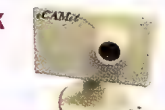
Cat 8995-9 Greek

Cat 8993-9 German

IP addressable Network

Camera

Cat 3487-9 \$669



Cat 8866

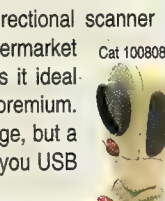
Laser Barcode Scanners

Performance handheld Laser Scanners at CCD prices!

Cat 8866-9 This robust, wide-mouthed scanner offers laser performance for only **\$329**

Cat 1008039-9 Style and performance! A really good-looking Keyboard Wedge Laser scanner with multiple interfaces. Just change the cable and you also have USB or Serial interfaces **\$399**

Cat 1008085-9 This Omni-Directional scanner is similar in function to the supermarket type. Its small footprint makes it ideal where counter space is at a premium. Standard interface is K/B wedge, but a simple change of cable gives you USB or Serial connectivity **\$1059**



Cat 1008085

Do you have Software with base address problems?

Then try this dual RS232 PCI Expansion Card with Remap to DOS. Suits Windows 3.1/95/98/NT/2000 & XP **Cat 2826-9 \$159**



Video Signal Conditioner

Stabilizes video signal when recording **Cat 3460-9 \$169**

PCMCIA to Serial

Add 2 high-speed serial ports to your mobile computer **Cat 2722-9 \$269**

Watch Dog Timer Cards

Apply either a software reset or power reset to your computer in the event of a "lockup"; ideal for remote installations.

Watch Dog = software reset

Watch Dog 2 = power reset.

Cat 17050-9 Watch Dog 2 ISA **\$399**

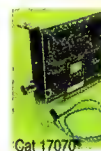
Cat 17044-9 Watch Dog ISA **\$165**

Cat 17070-9 Watch Dog PCI **\$332**

Cat 17076-9 Watch Dog 2 PCI **\$649**



Cat 17050



Cat 17070

Easy Transfer Bay

Cat 2857-9 Use your spare floppy drive bay to provide front access for FireWire, USB (1.1) and Serial, plus an Audio in and Audio out (RCA) **\$89**



Cat 2857

HALF PRICE BITS

Until end July 2003 or... ...while stocks last!

VGA, AGP x 4 Hulk V Geforce 2, MX400

Cat 3483-9 Normally \$159 NOW ONLY \$79

Infra Data Suite and Serial IR port for PDA and mobile phone

Cat 8912-9 Normally \$231 NOW ONLY \$89

Smart Media memory writer

Cat 6655-9 Was \$99 NOW ONLY \$49

Mobile SCSI Hard Drive kit

Cat 6613-9 Was \$89 NOW ONLY \$44.50

Removable SCSI Hard Drive kit

Cat 6327-9 Was \$192 NOW ONLY \$96

MP3 player without CF card

Cat 3454-9 Was \$389 NOW ONLY \$189

Multi PC Controller PS/2 AT

Cat 11631-9 Was \$957 NOW ONLY \$449

Digital Satellite TV card with CI

Cat 3510-9 Was \$459 NOW ONLY \$219

MicroGram Computers

Ph: (02) 4389 8444 FreeFax: 1800 625 777

info@mgram.com.au

Vamtest Pty Ltd trading as MicroGram Computers ABN 60 003 062 100, 1/14 Bon Mace Close, Berkeley Vale NSW 2261

All prices subject to change without notice. For current pricing visit our website. Pictures may be indicative only.

See all these products & more on our website...www.mgram.com.au

Galaxy 2000Cdx

- ★ Intel Celeron 2.0GHz Processor
- ★ Pentium-4 Motherboard
- ★ 256MB PC2100 DDR266 SDRAM
- ★ 1.44MB Floppy Disk Drive
- ★ 40GB 7200rpm Hard Disk Drive
- ★ 16x DVD-ROM or 48x CD-RW
- ★ 64MB nVidia GeForce2 MX 400
- ★ SB Compatible Audio
- ★ 56K PCI Modem
- ★ 17" LG CRT Monitor
- ★ Mini Subwoofer System
- ★ Internet Keyboard/Mouse
- ★ 3-Year Limited Warranty**
- ★ (Upgrade to Pentium 4 2.4 +\$199)



\$999

3-Year
Warranty**

POWERED BY



\$299*
Get Upgrade to
Samsung 151s
15" LCD Monitor

Software Option: MS Windows XP Home / Pro \$175 / \$285
(with system purchase only) MS Office XP SBE / Pro \$375 / \$47
MS WORKSUITE 2003 \$125

<http://www.apus.com.au>

Visit our web site
for the latest prices,
updated everyday!

USB Flash Drive

- 64MB USB Flash Drive \$49
- 128MB USB Flash Drive \$79
- 256MB USB Flash Drive \$119
- 512MB USB Flash Drive \$229
- 1GB USB Flash Drive \$499



USB 2.0 Hard Drive

- 20GB USB Hard Drive \$229
- 30GB USB Hard Drive \$259
- 40GB USB Hard Drive \$299
- 60GB USB Hard Drive \$429

Star 2000Anx+

- ★ AMD Athlon XP 2000+ Processor
- ★ Asus nForce Motherboard
- ★ 256MB PC2100 DDR266 RAM
- ★ 1.44MB Floppy Disk Drive
- ★ 40GB 7200rpm Hard Disk Drive
- ★ 16x DVD-ROM
- ★ 48x CDRW Drive
- ★ Integrated nVidia GeForce2MX Video
- ★ Dolby Digital 5.1 On board Sound
- ★ 56K PCI Modem
- ★ 17" LG CRT Monitor
- ★ Stereo Speaker
- ★ Internet Keyboard/Mouse
- ★ 3-Year Limited Warranty**
- ★ (17" Flat CRT Monitor -\$39)



\$999

Universe 2400Pd3

- ★ Intel Pentium-4 2.4B GHz Processor
- ★ Asus P4S8X-X DDR Motherboard
- ★ 256MB PC-2700 DDR333 SDRAM
- ★ 1.44MB Floppy Disk Drive
- ★ 60GB 7200rpm Hard Disk Drive
- ★ 16x DVD-ROM or 48x CDRW
- ★ 64MB DDR nVidia GeForce4 MX 440
- ★ Support 5.1 Audio
- ★ 56K PCI Modem
- ★ 17" LG CRT Monitor
- ★ Mini Subwoofer System
- ★ Internet Keyboard/Mouse
- ★ 3-Year Limited Warranty**
- ★ (upgrade to P4 2.66B +\$49)
- ★ (upgrade to P4 3.06B +\$460)



\$1299

Universe 2200Af

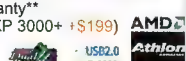
- ★ AMD Athlon XP 2200+ Processor
- ★ Asus A7V8X-X DDR Motherboard
- ★ 256MB PC-2700 DDR333 SDRAM
- ★ 1.44MB Floppy Disk Drive
- ★ 60GB 7200rpm Hard Disk Drive
- ★ 16x DVD-ROM or 48x CDRW
- ★ 128MB DDR nVidia GeForceFX 5200 8x
- ★ Support 5.1 Audio
- ★ 56K PCI Modem
- ★ 17" LG CRT Monitor
- ★ Mini Subwoofer System
- ★ Internet Keyboard/Mouse
- ★ 3-year Limited warranty**
- ★ (ATHLON XP 2400+ +\$45)



\$1299

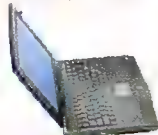
Universe 2800Anf+

- ★ AMD Athlon XP 2800+ Processor
- ★ nVidia nForce2 Motherboard
- ★ 1GB (Dual 512MB) PC3200 DDR SDRAM
- ★ 1.44MB Floppy Disk Drive
- ★ 80GB ATA-100 Hard Disk Drive
- ★ 16x DVD ROM
- ★ 52x CD-R/RW
- ★ 128MB DDR GeForce FX 5800
- ★ SB Compatible 5.1 Audio
- ★ 56K PCI Modem
- ★ 17" Hitachi CML174SXW DVI LCD Monitor
- ★ Creative Inspire 5200 5.1 Speaker
- ★ Microsoft Multimedia Keyboard/Opt Mouse
- ★ 3-Year Limited Warranty**
- ★ (Upgrade to Athlon XP 3000+ +\$199)



\$3388

COMPAQ Presario 1555AP



- ★ Intel Pentium 4 2.4GHz
- ★ 15" TFT Screen
- ★ 256MB DDR RAM
- ★ 30GB HDD
- ★ FDD/DVD/CDRW
- ★ 56K Modem & LAN
- ★ 32MB VIDEO
- ★ Windows XP Home



\$3199

COMPAQ EVO N1020V

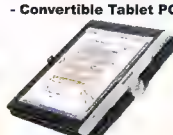


- ★ Intel Pentium4 2.0MHz
- ★ 14" TFT Screen
- ★ 256MB DDR RAM
- ★ 20GB HDD
- ★ 56K Modem & LAN
- ★ 32MB VIDEO
- ★ CD ROM
- ★ Windows XP PRO



\$2450

TOSHIBA Portege 3500 - Convertible Tablet PC



- ★ Intel® Pentium®III 1.33GHz
- ★ 12.0" Tablet TFT Screen
- ★ 256MB SDRAM
- ★ 30GB HDD
- ★ SD & CF Slot, Bluetooth
- ★ 56K Modem & LAN
- ★ Windows 2K Pro



\$3999

All Prices shown are inclusive of GST and subject to change without notice. Delivery Charges are additional.
** 3-year Limited Warranty includes 3 years labour warranty and 1 year part warranty. LG/Philips/Acer Monitor warranty service are provided by LG Electronic Australia. Please visit <http://www.lge.com.au> / <http://www.acer.com.au> / <http://www.philips.com.au> for more information. * Price Upgrade is based on the system which comes with 17" LG CRT Monitor.

Tel: 02-96630340
Fax: 02-96630348

Address: Shop 4, 255-271 Anzac Pde,
Kingsford, NSW 2032.

All Prices shown are inclusive of GST and subject to change without notice.
Intel, the Intel Inside logo and Pentium are registered trademarks of the Intel corporation. AMD, the AMD logo
AMD Athlon and AMD Duron are trademarks of Advanced Micro Devices Inc. All other names
or products are the trademarks of their respective companies.

HAGIWARA SYS-COM

MEMORY CARD

メモリにも画像の暗転や歪みがない画質も美しい!
ハイパフォーマンスコンパクトフラッシュ

Vシリーズ Zシリーズ

Made in Japan

128MB

MEMORY STICK

メモリースティック

HAGIWARA SYS-COM

CF Compact Flash Memory Card

Reading Speed KB/Sec

Brand	0	500	1000	1500	2000	2500	3000
Brand B							
Brand A							
Hagiwara Sys-Com							

SM SmartMedia Card

SD Secure Digital Card

MMC MultiMediaCard

Distributed by
Apus Computer & Communication 02-96630349
<http://www.apus.com.au>

*Hagiwara Sys-Com is a registered trademark of Hagiwara Sys-Com, JAPAN
All other names are trademarks of their respective companies.
For more information please visit <http://www.hscpn.co.jp> or <http://www.hscus.com>



Sometimes the best place
to find peace and quiet
is in your computer room.



Introducing The Ultra Silent Antec Sonata Case

Relax. Enjoy the comfort of your home with a computing system that should be seen and *not* heard. Sonata is stylish with its sleek, piano black finish and blue lit, chrome front port to fit even the most demanding personality. And it's totally engineered with quietness in mind with its low-noise cooling, vibration-absorbing drive mounts, and a special TruePower power supply. It will never disrupt your environment or your lifestyle. Now that's peace of mind. That's *the power of you*. To view our full line of products, visit us online at www.antec-inc.com.

Antec
The Power of You



Australian Premium Distributor:

Sydney:

37 - 39 Egerton Street,
Silverwater, NSW 2128
Tel: (02) 9735 5655
Fax (02) 9735 5656

sales@altech.com.au
www.altech.com.au

Brisbane:

64 Hope Street,
South Brisbane, QLD 4101
Tel: (07) 3017 2000
Fax (07) 3017 2020

info@altech.com.au
www.altech.com.au

Premium Retailers:

NSW Plus Corporation
PC Quest

Zip Computers
QLD Masterlink Computers
GameDude

National Computers
VIC Scorpion Technology
PC Case Gear
CPL

TAS Tasmanian Principal Computers

1800 007 587
1300 550 118

(02) 9602 8011
(07) 4125 5077
(07) 3387 1500
(07) 5531 3188
(03) 9886 1615
(03) 9568 0932
(03) 8542 8688

(03) 6225 0577

www.pluscorp.com.au
www.pcquest.com.au

www.mlink.com.au
www.gamedude.com.au

www.scorpiontech.com.au
www.pccasegear.com
www.cpl.net.au
www.tasmanianpc.com.au

Distributes hardware, software and peripherals



WHAT'S NEW?

from
Jaycar
Electronics

60 CD Drawer Case

- Store your CD collection neatly and with style
- Has 60 Sleeves inside (no need for cases)
- Transparent blue
- Smooth auto slide drawer

NEW



Cat. AR-1495 **\$24.95**

Infrared USB Converter for Mobile Phones

Easy maintenance of your mobile's phonebook!

Store, edit and add details from your PC to the phonebook on your mobile phone. Compatible with many of the popular mobile phones which support infrared data transfer.

- Supports Motorola L series, Nokia 8210 & 8250, Ericsson 8 series, Siemens S25 series.



Cat. XC-4831 **\$79.95**

USB Notebook Colour Camera

A tiny camera that clips on to your notebook screen.

- 100k pixels
- Up to 30fps

NEW

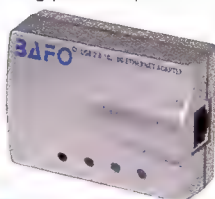


Cat. QC-3225 **\$74.95**

USB 2.0 10/100 Ethernet Network Adaptor

Connect to a network using your USB port.

- USB 1.0, 1.1 & 2.0 compliant
- IEEE 802.3u 10/100 Base-T, TX & T4 compatible
- USB 2.0 cable and software / drivers included



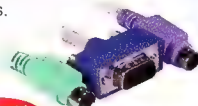
Cat. YN-8065 **\$79.95**

NEW

2 Port Automatic KVM Switch

This automatic keyboard, video / monitor (KVM) switch allows the user to connect 2 PC's to the one monitor, keyboard and mouse, switching between machines.

- Keyboard hotkeys for fast, easy switching.
- Max Resolution: 1600 x 1200 pixels.



NEW

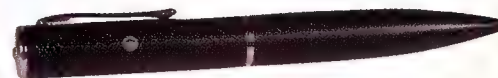


Cat. YN-8095 **\$99.00**

Pen Digital Camera

Not quite the secret agent camera but this little beauty slips into your shirt pocket without anybody knowing that it's there. It actually has a twist action pen built in!

- Resolution: 320 x 240 pixels - CMOS Sensor- Stores up to 36 shots!



Cat. QC-3380 **\$119.95**

NEW

YOUR LOCAL JAYCAR STORE

NEW SOUTH WALES	
BANKSTOWN	PH (02) 9709 2822
BONDI JUNCTION	PH (02) 9369 3899
BROOKVALE	PH (02) 9905 4130
CAMPBELLTOWN	PH (02) 4620 7155
ERINA	PH (02) 4365 3433
NEWCASTLE	PH (02) 4965 3799
PARRAMATTA	PH (02) 9683 3377
PENRITH	PH (02) 4721 8337
SILVERWATER	PH (02) 9741 8557
ST. LEONARDS	PH (02) 9439 4799
SYDNEY CITY	PH (02) 9267 1614
WOLLONGONG	PH (02) 4226 7089
VICTORIA	
COBURG	PH (03) 9384 1811
FRANKSTON	PH (03) 9781 4100
GEELONG	PH (03) 5221 5800
MELBOURNE	PH (03) 9663 2030
RINGWOOD	PH (03) 9870 9053
SPRINGVALE	PH (03) 9547 1022
QUEENSLAND	
ASPLEY	PH (07) 3863 0099
BRISBANE - WOOLLOONGABBA	PH (07) 3393 0777
GOLD COAST - MERMAID BEACH	PH (07) 5526 6722
TOWNSVILLE	PH (07) 4772 5022
AUSTRALIAN CAPITAL TERRITORY	
CANBERRA	PH (02) 6239 1801
TASMANIA	
HOBART	PH (03) 6231 5877
SOUTH AUSTRALIA	
ADELAIDE	PH (08) 8231 7355
WESTERN AUSTRALIA	
PERTH	PH (08) 9328 8252
NEW ZEALAND	
NEWMARKET - AUCKLAND	PH (09) 377 6421
GLENFIELD - AUCKLAND	PH (09) 444 4628
WELLINGTON	PH (04) 801 9005
CHRISTCHURCH	PH (03) 379 1662
FREECALL ORDERS PH 0800 452 9227	

Off-table Track Mouse

Off-table track mouse which you operate easily and comfortably with your thumb.

- Good for presentations
- Ideal for laptops owners or to avoid harm to your wrist or muscles



Cat. XM-5130 **\$29.95**

NEW

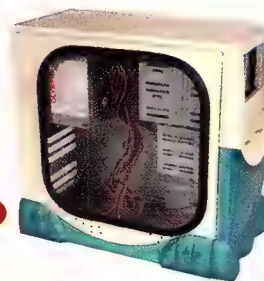
Perspex Window Kit for ATX Cases

Showcase your computer.

Once fitted you have visual access to your computers internals. Endless possibilities using our neon lights - come and see the range!

- 300 x 300mm

- Case not included



Cat. XC-4638 **\$24.95**

NEW

SENSATIONAL SCOOP PURCHASE

PANDUIT Cat 5 Leads

We have bought a quantity of Panduit brand Cat 5 leads, and can offer them at a never-to-be-repeated price. Cat 5 leads will generally work fine in place of Cat 5e for short lengths, so here is a chance to save.

All leads are fully approved, and are the standard blue colour.

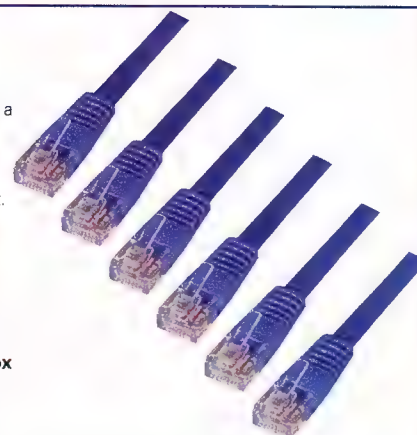
They are supplied in packs of either 2 or 5. Packs cannot be mixed for discount.

CHEAP

Priced Way Way Below Normal,
Limited Quantity, Stock up Now!

CHEAP

Cat.	Length	Pack Qty	1 Pkt	4 Pkts	10 Pkts	Cat 5e/ea
YN-8180	0.5m	5	\$9.95	\$8.75	\$7.75	\$3.25
YN-8181	1.0m	5	\$11.95	\$10.70	\$9.50	\$3.95
YN-8182	1.5m	5	\$13.95	\$12.35	\$10.95	\$4.50 approx
YN-8183	2m	2	\$7.50	\$6.75	\$5.95	\$5.25
YN-8184	3m	2	\$8.95	\$7.95	\$6.95	\$6.95
YN-8185	5m	2	\$12.50	\$10.95	\$9.95	\$8.95



All prices valid to
end July 2003

FREECALL FOR ORDERS

1800 022 888

www.jaycar.com.au

Jaycar
ELECTRONICS

WinFast®

The Era of Cinematic 3D Gaming

300 series

GeForce is a registered trademark and/or trademarks of NVIDIA Corporation in the United States and other countries. © 2002 NVIDIA Corporation. All rights reserved.

WinFast® A300 series - Equipped with Nvidia® CineFX™ Engine, supports new Cg high-level shading language, and achieves cinematic visual effects real-time.

- The NVIDIA® GeForce FX™ GPU applies the latest and most sophisticated 0.13 micron process technology, which is for higher levels of integration and higher operating clock speeds.
- 8 pixels per clock rendering engine.
- DirectX® 9.0 and OpenGL® 1.4 hardware supports
- Supports latest AGP 8X standard, up to 2.1 GB/s data transfer rate
- Advanced Pixel Shader 2.0+ and Vertex Shader 2.0+ engines
- World's fastest memory with speeds up to 1.0GHz DDR II
- Blistering-fast antialiasing NVIDIA Intellisample™ technology.



TI AMD Hot Pack

AMD Athlon XP 1800+	\$689
AMD Athlon XP 2200+	\$725

ASUS A7N266-VM

AMD CPU Fan
3.5" FDD Panasonic
256Mb DDR Kingston or Apacer PC2100
40Gb Seagate Barracuda 4 7200rpm
A-Open KF-45 Medium Case
Add Monitor from Monitor List
nVIDIA GeForce II Mx SVGA Integrated
PS II Acer Keyboard & Wheel Mouse
52x24x52 CD-RW LG with Nero Software
Dolby Integrated Audio
Built in 10/100 Network card

TI AMD Deluxe Pack

AMD Athlon XP 2200+	\$885
AMD Athlon XP 2400+	\$925
AMD Athlon XP 2600+	\$1,035
AMD Athlon XP 2700+	\$1,085
AMD Athlon XP 2800+	\$1,175

GA 7VAXP Raid Firewire 10/100 USB 2.0
256Mb DDR PC2700 Kingston or Apacer
40Gb Seagate 7200rpm ATA 100
A-Open Deluxe KF-45 ATA Case
Add Monitor from Monitor List
64Mb GeForce 4 MX440 DDR
Ps II Acer Keyboard & Wheel Mouse
52x24x52 CD-RW LG with Nero Software
Built in 3D Sound Card
3.5" FDD Panasonic 120W Speakers
Add Monitor from Monitor List

TI AMD Super Deluxe Pack

AMD Athlon XP 2200+	\$1,460
AMD Athlon XP 2400+	\$1,500
AMD Athlon XP 2600+	\$1,599
AMD Athlon XP 2700+	\$1,650
AMD Athlon XP 2800+	\$1,735

ASUS A7N 8X Deluxe Raid SATA
10/100 & firewire & Dolby Digital Audio
128Mb Leadtek GeForce 4 TI 4200 VIVO DVI
512Mb DDR Kingston PC2700
80Gb Seagate Barracuda 5 8Mb 7200rpm
TI Deluxe Server Case 350W USB in front
Add Monitor from Monitor List
MS Internet KB & MS Optical Wheel Mouse
LG 16 Speed DVD LG with Power DVD
52x24x52 CD-RW LG with Nero Software
600W Subwoofer Speaker

TI AMD Dream Pack

AMD Athlon XP 2200+	\$1,620
AMD Athlon XP 2400+	\$1,670
AMD Athlon XP 2600+	\$1,770
AMD Athlon XP 2700+	\$1,820
AMD Athlon XP 2800+	\$1,910

ASUS A7N 8X Deluxe Raid SATA
10/100 & firewire & Dolby Digital Audio
120Gb Seagate SATA 8Mb cache 7200
512Mb DDR PC3200 Samsung 400MHz
TI Deluxe Server Case 350W USB in front
128Mb Leadtek GeForce 4 TI 4200 VIVO DVI
MS Internet KB & MS Optical Wheel Mouse
Add Monitor from Monitor List
52x24x52 CD-RW LG with Nero Software
16 Speed DVD LG with Power DVD
Creative SBS 370 Subwoofer speaker

TI P4 Hot Office Pack

Pentium 4 1.7Ghz C	\$685
Pentium 4 2.4Ghz	\$875
Pentium 4 2.67Ghz	\$935

GA 8VD687 Intel Chipset USB 2.0

256Mb DDR PC2700 Kingston or Apacer
40Gb Seagate 7200rpm ATA100
3.5" FDD Panasonic
Built in 3D SVGA Card
A-Open KF45 Case ATX
PS II Keyboard & Wheel Mouse
Add Monitor from Monitor List
52x24x52 CD-RW LG with Nero Software
Integrated PCI 3D Sound Card
4 x USB Port
120W Power Speaker

TI P4 Deluxe Pack

Pentium 4 2.4Ghz	\$1,125
Pentium 4 2.67Ghz 533FSB	\$1,170
Pentium 4 2.8Ghz 533FSB	\$1,295
Pentium 4 3.06Ghz 533FSB	\$1,560

ASUS P4PE Intel 8PE Chipset Intel 10/10
256Mb DDR PC2700 Kingston or Apacer
80Gb Seagate Barracuda 5 8Mb 7200rpm
3.5" FDD Panasonic
A-Open KF45 Case
64Mb GeForce 4 MX440 DDR TV out
MS Internet KB & MS Optical Wheel Mouse
Add Monitor from Monitor List
52x24x52 CD-RW LG with Nero Software
Built in Sound Card
120W Power Speakers

TI P4 Super Deluxe Pack

Pentium 4 2.4Ghz	\$1,620
Pentium 4 2.67Ghz 533FSB	\$1,665
Pentium 4 2.8Ghz 533FSB	\$1,785
Pentium 4 3.06Ghz 533FSB	\$2,040

ASUS P4PE Intel 8PE Chipset Dual Gigabit
LAN SATA Raid 1394 Firewire USB 2.0
80Gb Seagate Barracuda 5 8Mb 7200rpm
512Mb DDR PC2700 Kingston or Apacer
TI Deluxe Server Case 350W USB in front
128Mb Leadtek GeForce 4 TI 4200 VIVO DVI
MS Internet KB & MS Optical Wheel Mouse
Add Monitor from Monitor List
52x24x52 CD-RW LG with Nero Software
16 Speed DVD LG with Power DVD
Built in 3D Sound & 800W Subwoofer Speaker

TI P4 800FSB Pack NEW!!

Pentium 4 2.4Ghz 800FSB	\$1,785
Pentium 4 2.67Ghz 800FSB	\$1,845
Pentium 4 2.8Ghz 800FSB	\$1,965
Pentium 4 3.06Ghz 800FSB	\$2,200

ASUS P4C800 Deluxe Intel 875 Chipset
SATA Raid Firewire AGP x 8 Gigabit LAN
80Gb Seagate Barracuda 5 8Mb 7200rpm
512Mb DDR PC3200 Samsung 400MHz
TI Deluxe Server Case 350W USB in front
128Mb Leadtek GeForce 4 TI 4200 VIVO DVI
MS Internet KB & MS Optical Wheel Mouse
Add Monitor from Monitor List
52x24x52 CD-RW LG with Nero Software
16 Speed DVD LG with Power DVD
Built in 3D Sound & 600W Subwoofer Speaker

TI AMD Dual Pack

Dual AMD Athlon MP2200	\$1,860
Dual AMD Athlon MP2400	\$1,945
Dual AMD Athlon MP2600	\$2,115

TYAN AMD Dual S2466-4M 10/100

Tyan Server Motherboard
3.5" FDD Panasonic
512Mb DDR RAM PC2100 ECC Reg
80Gb Seagate Barracuda 5 8Mb 7200rpm
TI Deluxe Server Case 350W
Add Monitor from Monitor List
64Mb DDR GeForce 4 Mx440 DDR TV out
Ps II K/B & Logitech Optical Mouse
52x24x52 CD-RW LG with Nero Software
Built in 3D Sound
120W Subwoofer Speaker

TI P4 Business Pack

Pentium 4 1.7Ghz Celeron	\$770
Pentium 4 2.4Ghz	\$970
Pentium 4 2.67Ghz 533FSB	\$1,020
Pentium 4 2.8Ghz 533FSB	\$1,140
Pentium 4 3.06Ghz 533FSB	\$1,410

Intel D845GBVL 533 USB 2.0 Intel LAN
256Mb DDR PC2700 Kingston or Apacer
80Gb Seagate Barracuda 5 8Mb 7200rpm
3.5" FDD Panasonic
A-Open KF45 Case
Built in Intel Extrem SVGA
Ps II Keyboard and PS II Wheel Mouse
Add Monitor from Monitor List
52x24x52 CD-RW LG with Nero Software
Built in Sound Card Intel 10/100 Network
120W Power Speakers

TI Pro Intel Server Pack

Dual Intel Xeon 2G (2xCPU)	\$3,125
Dual Intel Xeon 2.4G (2xCPU)	\$3,198
Dual Intel Xeon 2.6G (2xCPU)	\$3,465
Dual Intel Xeon 2.8G (2xCPU)	\$4,125

Intel Clear Water Dual Xeon
Dual Intel 1000+ Server Network Card
Promise Dual Channel Raid Card
512MbDDR RAM PC2100 ECC Reg
2 x 120Gb Seagate 7200rpm 8Mb Cache
Intel Hudson 3.5U Server Case 450W
Ps II Keyboard & Optical Wheel Mouse
3.5" FDD Drive
Add Monitor from Monitor List
52x24x52 CD-RW LG with Nero Software
Upgrade to SCSI Intel I/B
Upgrade to 1 x 36Gb SCSI \$51

TI Super Pro Server Pack

Dual Intel Xeon 2G (2xCPU)	\$4,950
Dual Intel Xeon 2.4G (2xCPU)	\$4,995
Dual Intel Xeon 2.6G (2xCPU)	\$5,285
Dual Intel Xeon 2.8G (2xCPU)	\$5,870

Intel SE7501HG2 Dual Xeon Server
Dual Intel 1000+ Server Network 533MHz
Dual Channel Ultra320 SCSI
1G DDR RAM PC2100 ECC Reg
2 x 36Gb Seagate Cheetah Hot Swap HDD
Intel Hudson KHD3HSRP 650W & 5 x Hot bay
(2 x 350W Redundant Power) Included
Ps II Keyboard & Optical Wheel Mouse
Add Monitor from Monitor List
52x24x52 CD-RW LG with Nero Software

For latest prices
please visit our
website at

www.ticomputers.com.au

Excel Eco 730

Pentium 4 2.4G	\$2,350
Pentium 4 1.8G	\$2,298
Pentium 4 2G Celeron	\$2,135

Intel 845 Chipset 256Mb Ram 20Gb HDD
16xCD-RW 8xDVD Combo 64Mb ATI M7
VGA 15" TFT 56K F/M 10/100 Network 15" TFT
3D Audio Firewire 4 x USB & Infrared Win XP Home

Excel Eco 732

Pentium 4 2.6G	\$2,830
Pentium 4 2.4G	\$2,720
Pentium 4 2.5G	\$2,665

256Mb DDR 20Gb HDD 64Mb ATI M9
SVGA 15" TFT 1400x1050 56K & Lan 15" TFT
16xCDRW 16xDVD Combo 4 x USB 2.0
Firewire 1394 Audio DJ & Infrared Win XP Home

Excel Slimnote GT550

Pentium 4-M 2.4G(Mobile)	\$2,850
Pentium 4-M 2.2G(Mobile)	\$2,570
Pentium 4-M 1.8G(Mobile)	\$2,399

256Mb DDR 20Gb HDD Up to 64MbVGA
15" TFT & 16XCDRW 16xDVD Combo 15" TFT
56K F/M 10/100 Net 1394 Firewire Port
2 x USB 2.0 Ports Infrared Port 2.8Ghz Win XP Home

CPU

Pentium 1.7G Celeron Intel CPU	\$112
Pentium 2.0G Celeron Intel CPU	\$138
Pentium 2.2G Celeron Intel CPU	\$158
Pentium 4 2.4GHZ	\$312
Pentium 4 2.53GHZ	\$358
Pentium 4 2.66GHZ	\$362
Pentium 4 2.8GHZ	\$482
Pentium 4 3.0GHZ	\$748
Intel Xeon 2.4G Intel CPU	\$450
Intel Xeon 2.6G Intel CPU	\$585
Intel Xeon 2.8G Intel CPU	\$685
AMD Athlon XP 1800+ Retail	\$136
AMD Athlon XP 2100+ Retail	\$162
AMD Athlon XP 2200+ Retail	\$169
AMD Athlon XP 2400+ Retail	\$209
AMD Athlon XP 2600+ Retail	\$309
AMD Athlon XP 2700+ Retail	\$368
AMD Athlon XP 2800+ Retail	\$449
AMD Athlon XP 3000+ Retail	\$648

Memory

256Mb 168Pin SD Double Side PC133	\$136
256Mb DDR PC2700	\$59
256Mb DDR PC3200 Samsung	\$99
512Mb DDR PC2700	\$105
512Mb DDR PC3200 Samsung	\$195
Special 128Mb Notebook SD	\$83
Special 256Mb Notebook DDR	\$110

HDD

40Gb Seagate Barracuda 4 7200rpm	\$129
80Gb Seagate Barracuda 4 7200rpm	\$179
120Gb Seagate ATA100 7200rpm	\$259
120Gb Seagate Serial ATA 7200rpm	\$316
80G WD HDD 7200 8mb Cache	\$198
80G Maxtor ATA133 7200rpm	\$165
Cheetah 36Gb 15,000rpm U160	\$725
Cheetah 36Gb 10,000rpm U160	\$378
Cheetah 73Gb 10,000rpm U160	\$945
20G 2.5" Hitachi Notebook HDD	\$156
40G 2.5" Hitachi Notebook HDD	\$219

Monitor

Hitachi 19" CM721 0.20dpi	\$499
Hitachi 15" CML154SXW 15" TFT	\$621
Hitachi 17" CML174SXW 17" TFT	\$881
Hitachi 18" CML181SXW 17" TFT	\$1,451
Benq FP 557 15" LCD	\$499
Benq FP767 17" LCD	\$537
Benq FP 882 18" LCD	\$1,246
Vibrant 15" LCD with Speaker	\$475
LG 1512S 15" LCD	\$536
Mitsubishi 17" Diamond 1786	\$276
Mitsubishi 19" Diamond 1998FD	\$460
Mitsubishi 15" Diamond DV159	\$576
Mitsubishi 17" Diamond DV172	\$876
15" Samsung 152S LCD 15" TFT	\$731
17" Samsung 172T LCD Monitor	\$1,199
19" Samsung 191T LCD Monitor	\$1,626
Sony SDM-S51 15" LCD	\$686
Sony SDM-S71 17" LCD	\$1,121
Panasonic 15" LCD15MSIL Ultra Slim	\$600

Graphics Card

ASUS SVGA Card	
V9180 64Mb MX440 AGPx8	\$173
V9280 128Mb TI4200 DVI	\$341
V9280 128Mb TI4200 DVI/SuperFast	\$426
Leadtek	
128M TI 4800 DVI VIVO AGPx8	\$365
128M TI 4200 VIVO DVI A280	\$298
64Mb MX440 AGPx8 Dual Head	\$163
128Mb FX5200 DVI Dual Head	\$189
Leadtek Workstation Graphic	
Quadro4 380XGL 64Mb DDR Ram	\$396
Quadro4 750XGL 128Mb DDR Ram	\$1,026
Quadro4 980XGL 64Mb DDR Ram	\$1,600
Leadtek Quadro4 NVS 200	\$379
Sapphire	
Sapphire ATI Radeon 9100 Pro	\$226
Sapphire ATI Radeon 9500	\$358
Sapphire ATI Radeon 9700	\$500
Sapphire ATI Radeon 9700 Pro	\$671

TI Computers won
PC World's Number 1
"BEST BUY"



TI Computers
consistently awarded
PC User "TOP 5"



SHOP 5
10-12 Clarke St
Crows Nest
NSW 2065

Trading Hours: Mon - Fri 9:30am - 6:00pm Sat 9:30am - 3:00pm Bank Details: Westpac Bank BSB 032298 Account 165700

ALL Prices Include GST. Price subject to change without notice. Please call for latest pricing.

UNLIMITED downloads
Broadband or Dial-up: Apply online

*"C'mon...
turn me on!"*

Cheetah®

ADSL internet **\$79.95*** p.m

hi-speed broadband, unlimited download!

*Additional activation or modem fees apply, extra in regional areas, all subject to terms and conditions



coolcats® 56k Dial-up **\$21.95*** p.m

cool internet...

'All you can Use' with unlimited downloads

*Subject to terms and conditions and acceptable user policy. \$27.95 in Regional/Country areas

Ozzieweb
do it smarter, do it faster...

ACN 075 090 943
Coolcats & Cheetah are registered
trademarks of Ozzieweb Pty Ltd



www.ozzieweb.net.au

Ph: 1300 72 73 74

www.arcco.com.au

ARC also holds a FULL range of parts for PC's

ARC COMPUTERS

Penrith Ph: 02 47211046 Fax: 02 47222064 Cnr of High & Station St penrith@arcco.com.au	Parramatta Ph: 02 96335566 Fax: 02 96879165 85/87 Macquarie St parramatta@arcco.com.au	Liverpool Ph: 02 98214690 Fax: 02 98214678 222 George St liverpool@arcco.com.au	Silverwater Ph: 02 97488322 Fax: 02 97488155 3C 137-139 Silverwater Rd silverwater@arcco.com.au	Chatswood Ph: 02 98848655 Fax: 02 98848255 Shop 1, 3-9 Spring St chatswood@arcco.com.au
---	---	--	--	--

Intel CPU (Skt 478)

P4 3.0 GHz 512K 533 \$754
P4 2.8 GHz 512K 533 \$509
P4 2.6 GHz 533 \$379
P4 2.4 GHz 533 \$322
CELERON 2.4 GHz \$214
CELERON 2.3 GHz \$186

AMD CPU

ATHLON 3000+ (Barton) \$678
ATHLON 2800 Box (Fan) \$475
ATHLON 2700 Box (Fan) \$384
ATHLON 2600+ Box (Fan) \$319
ATHLON 2400+ Box (Fan) \$216
ATHLON 2000 Box (Fan) \$140
DURON 1.3 GHz \$78

Mother Boards

Gigabyte 8INXP(Skt 478) \$430
Gigabyte 8SQ 800 Ultra(Skt 478) \$256
ASUS P4PE(Skt 478) \$187
ASUS A7V8X-X (Skt A) \$150
Gigabyte 7VAXP (Skt A) \$200
Leadtek K7NCR18G-PRO(Skt A) \$240
GA -8SKML SIS650 Vid(Skt 478) \$129
ECS P4S5MG/GL AIO(Skt 478) \$115

Video Cards

GeForce 4
Leadtek FX 5800 TD 128MB \$751
Leadtek FX5600 TD ULTRA \$414
Leadtek 128Mb Ti4200 DVI 8X \$289
Leadtek MX440 64Mb DDR 8x \$129
64MB DDR MX440SE W/TV \$98

ATI

Radeon 9700 Ultimate 128Mb \$764
Radeon 9500 Pro 128Mb 8x \$399
Radeon 9000 Pro 64Mb TV \$143

Sound Cards

Creative SB Audigy2 Platinum \$437
Creative SB Extigy \$308
Creative SB Audigy PCI \$146
SB LIVE PLAYER 5.1 \$69
SB 128 PCI \$28

MEMORY

PC133 128MB 4chip SDRAM \$43.20
PC133 256MB SDRAM \$73.90
PC2100 128MB DDR \$46.20
PC2100 256MB DDR \$47.50
PC2700 256MB DDR \$52.80
PC2700 512MB DDR \$99.00

Monitors

CRT

15" ACER \$205
17" Viewsonic E70F \$253
17" LG 700B Flatron \$272
19" Mitsubishi 19" 1998 \$374

LCD

15" OMNI \$494
15" BENQ FP 567 \$544
15" LG 1510 \$642
15" SAMSUNG 151S (black) \$670
17" LG 1710S \$838

Hard Disk Drives

20GB 7200 RPM \$115
40GB 7200 RPM \$126
60GB 7200 RPM \$167
80GB 7200 RPM \$172
120GB 7200RPM \$233

CASE'S/PSU

ANTEC LAN BOY \$189
ANTEC SONATA \$208
THERMALTAKE 5000 \$212
ANTEC 380W TRUE POWER \$139
ANTEC 480W TRUE POWER \$186

ALL PRICES ARE SUBJECT TO CHANGE AT ANYTIME!

Highgrade: Ultinote 6600 (nVidia Geforce4 440)

Mobile P4 1.8GHz, 15.1" LCD, 64MB Geforce4 AGP, 256MB DDR, 20GB HDD, 8X DVD, Modem, LAN, 4-in-2 Smartcard Reader, 4x USB 2.0, 12 Cell Li-ion Battery, Carry Bag, Win XP (Home) **\$2874**

Highlander: HL-86/P240DW-20

P4-2.4Ghz, 256M DDR, 20GB, Mod+Lan, Cdrw+Dvd, 15"XGA, Geforce-4 64M, 4x usb-2.0, TV-Out, IEEE-1394, Fir, 1x PCMCIA slot, LI-ION, Xp Home, 3.1Kgs, 1YR-ONSITE **\$2874**

HOME PREMIUM

AMD XP 2000 BOX
PC2700 256Mb DDR
Gigabyte 7VA
OMNI 4718/4713 400W/USB
1.44 FDD
LG 52x24x52
40Gb 7200
56K Internal
Geforce4 MX440SE 64MbDDR
TV
Benq 17" V772
Logitech Classic Desktop
K/B&MS
Juster 3D-501
Norton Anti Virus 2003 OEM
Microsoft Windows Xp Home
Microsoft Office Xp Small Buss

\$1595

GAMER ENTRY

Intel P4 2.4G 512K
PC2700 512Mb DDR
Gigabyte 8PE800PRO
KW 8310SL-AL05 White
1.44 FDD
LG 16xDVD 48x24x48
80Gb 7200
Netcomm INT 56K
Radeon 9100 128Mb
Viewsonic 17" E70F FLAT
Microsoft Multimedia OEM
Microsoft wheel optical oem
Altec Lansing AVS500
Norton Anti Virus 2003 OEM
Microsoft Windows Xp Home
Microsoft Office Xp Small Buss

\$2302

GAMER EXTREME

AMD XP 2400+ Box
PC 2700 512Mb KM
Gigabyte 7VAX1394
Radeon 9700 Pro 128Mb 8x
Western Digital 120Gb 8M JB
1.44 FDD & Netcomm INT 56K
LITEON 16XDVD
LITEON 52X24X52
Creative SB Audigy -2 PCI DE
Antec Plus660 AMG Case Silver
Mitsubishi 19" 1998FD FLAT
Microsoft Multimedia OEM
Microsoft Explorer optical oem
Altec Lansing 251
Microsoft Windows Xp Pro
Microsoft Office Xp Small Buss

\$3534

the full
experience
on your new PC



- Designed for business networking.
- Premier mobile support for the ability to work offline or access your computer remotely.
- Greater security, including encryption of files and folders.
- Designed to simplify the way you work and improve productivity.

Microsoft® Office XP Professional

Includes:

- Word 2002
- Excel 2002
- Outlook® 2002
- PowerPoint® 2002
- Access 2002

(OEM Edition also includes Microsoft Publisher 2002)

ARC Computers Recommends Windows XP Professional for Business

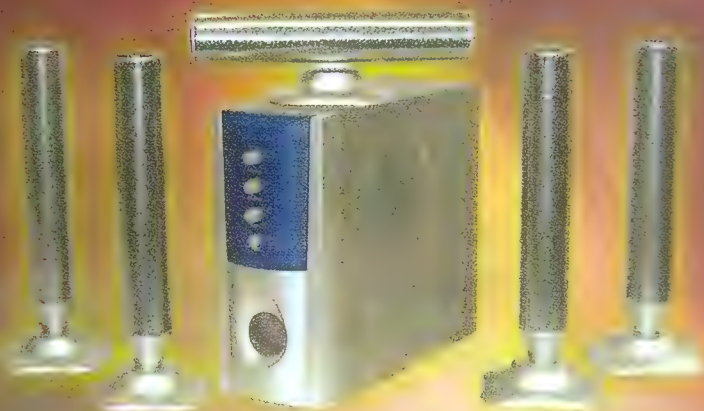
Systems to suit you

ROCK *A new generation of PC speakers*

Sleek, sophisticated, and some models are 5.1 Capable.

Good quality at an affordable price.

Perfect to use with your DVD player, Perfect to suit your lifestyle!



MS-5120



MS-2126



MS-1168F



MS-1168



MS-802

Australian Master Distributor

www.anyware.com.au

Anyware™ COMPUTER ACCESSORIES

SYDNEY

TEL: 02-9879 5788 FAX: 02-9879 5388

MELBOURNE

TEL: 03-9763 8200 FAX: 03-9763 8400

PERTH

TEL: 08-9242 8588 FAX: 08-9242 8688

ADELAIDE

TEL: 08-8347 0488 FAX: 08-8347 0466

BRISBANE

TEL: 07-3856 3999 FAX: 07-3856 1777

Available through Anyware resellers across the country. Please ask your local computer shops for availability and prices.

shop wise CLASSIFIEDS

COMPANY LIST

- New Reality • Pelham • DiskMax • Upgrade Yourself Computers • Daitronics • Perfect Image Software •
- Digitac • Matrix Micro Systems • Server 101 •

FOR ADVERTISING DETAILS, PLEASE CALL JULES FLAKELAR ON (02) 9288 9158.

www.newreality.com.au www.newreality.com.au www.newreality.com.au www.newreality.com.au www.newreality.com.au www.newreality.com.au www.newreality.com.au www.newreality.com.au

SUPERIOR PERFORMANCE INKJET REFILL KITS

REFILL & SAVE AT LEAST 80% OFF PRINTING COSTS



We stock a large range specialty paper and media including High Resolution, Full Gloss, Clear Film and Magnetic Paper.



Why not try New Reality's 'Easy-to-Use' Inkjet Cartridges, available for all major brands of printers. Enquire today!

Your printer not listed? We stock Australia's largest range of printer consumables. Call Now!



BLACK REFILL KITS FROM ONLY \$24.90

DESCRIPTION (Kits Compatible with Printers listed below)

No. of Refills	Product Code
60	20-BKL
60	21-BKL
9	3-BKL
16	5-BKL
45	19-BKL
9	18-BKL
12	46-BKL
6	43-BKL
6	52-BKL
8	8A-BKL
8	8B-BKL
8	29-BKL
12	7-BKL
12	1-BKL
12	2-BKL
12	23-BKL
12	33A-BKL
12	33B-BKL
12	Please Call!
6	35A-BKL
6	35B-BKL
6	35C-BKL

Easy to use Refill Kits also available for Apple, Brother, Samsung, Sharp and Xerox Printers, Multifunction & Fax Machines...CALL NOW!



Black kits include superior, dense & sharp black inks!

COLOUR REFILL KITS FROM ONLY \$34.90

DESCRIPTION (Kits Compatible with Printers listed below)

No. of Refills	Product Code
3x30	22-CLR
3x8	25-CLR
3x8	10-CLR
3x30	17-CLR
3x8	47-CLR
3x6	53-CLR
3x12	14A-CLR
3x12	14B-CLR
3x3	30A-CLR
3x3	30B-CLR
3x4	15-CLR
3x12	24-CLR
3x12	34A-CLR
3x12	34B-CLR
3x12	Please Call!
3x6	36A-CLR
3x6	36B-CLR
3x6	36C-CLR

Easy to use Photo Realistic Refill Kits available for all Canon, Epson, HP & Lexmark Photo Quality Printers...CALL NOW!



Colour kits include magenta, cyan & yellow inks!

USING NEW REALITY'S INKJET REFILL KITS WILL NOT VOID YOUR PRINTER'S WARRANTY. BEWARE OF INFERIOR COPIES, BUY THE "ORIGINAL" AUSTRALIAN REFILL KIT! New Reality has no affiliation with any printer manufacturers or OEM's and nor has any arrangement been made with them to form the basis of any statements we make.



New Reality
COMPUTER SUPPLIES
New Ideas, New Products... New Reality
Dealers wanted in all states and NZ!
For more information please call:

New Reality Resources Pty Ltd. ACN - 973 301 615
Australia Wide FREECALL - 1800 680 605
Fax - (07) 3245 2755

Bayside Business Park
Shop 1/70 Ridgeland Bayside
Capalaba QLD 4157

General Enquiries - (07) 3245 2411



FREE CATALOGUE
WITH EVERY PURCHASE



Freecall

ORDER HOTLINE

1800 680 605

www.newreality.com.au



FREE AUSTRALIA WIDE DELIVERY! SAME DAY DISPATCH!!
COD * MONEY ORDER * CHEQUE * MASTER * VISA * BANKCARD * AMEX ACCEPTED



Router Memory

Router memory available for all major brand switch / router manufacturers.



PELHAM PTY LTD

1/100 Yarrara Rd., Pennant Hills NSW 2100

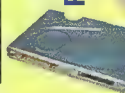
(02) 9980 6988

ram@pelhampl.com.au

www.pelhampl.com.au

E&OE INCL GST 07/02

Camera & PDA Cards



USB STORAGE KEYS

256Mb USB Key	\$200
512Mb USB Key	\$556

COMPACT FLASH

64Mb Compact Flash	\$40
128Mb Compact Flash	\$70

SECURE DIGITAL

64Mb Secure Digital	\$74
---------------------	------

MULTIMEDIA

64Mb Multimedia Cards	\$87
-----------------------	------

CISCO

2600 8MB Flash Simm	\$488
---------------------	-------

6 in 1 USB Card Reader / Writer \$63

Computer Ram

SDRAM

128Mb (16x64) PC100	\$93
256Mb (32x64) PC133	\$172
512Mb (64x64) PC133	\$197

NOTEBOOK SDRAM

128Mb (16x64) PC100	\$97
256Mb (32x64) PC100	\$203

DDR

256Mb PC2100 DDR	\$93
512Mb PC2100 DDR	\$180

SIMMS 72 PIN

32Mb EDO 60ns	\$67
---------------	------

Prices as at 14 May 2003
Memory available for all brands. Call for latest prices

DiGiTAC

www.digitac.com.au

sales@digitac.com.au

401 Waverley Rd

East Malvern Vic 3145

P: (03) 9563 5355 F: (03) 9563 5382

Power Desktops

Power Pack

Graphic, Game & Video Edit all in One



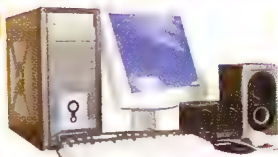
Intel Pentium4 2.5GHz, 512MB DDR RAM, 80GB HDD, Geforce4 Ti4200 128MB VIVO Graphics, 52x CD-RW, 16x DVD ROM, 19" FlatFace CRT Monitor, 6-Channel Audio & Speakers, Win XP Home, 2-Year Warranty

\$2299

Flexirent from \$19 / week

GTS Deluxe

Electrifying Performance



Intel Pentium4 2.6GHz, 1GB DDR RAM, 120GB HDD, Geforce FX5200Ultra 128MB Graphics, 17" LCD Flat Panel Screen, SB Audigy DE Sound, LG DVD-RW/-R Drive, Creative 5.1 Speakers, Cordless Optical Keyboard & Mouse, Win XP Home, 2-Year Warranty

\$3799

Flexirent from \$29 / week

Super Power

Make Dreams a Reality



Intel Pentium4 3.0Ghz, 1GB DDR RAM, 120GB SATA HDD, ATI Radeon9800Pro 128MB Graphics, LG DVD-RW/-R Drive, 19" FlatFace CRT Monitor, Audigy2 Platinum EX Sound, Creative 6.1 Speakers, Win XP Home, Cordless Optical Keyboard & Mouse

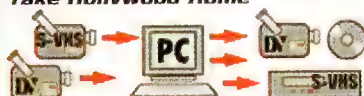
\$4899

Flexirent from \$38 / week

Graphic Stations

Home Video Editor

Take Hollywood Home



Intel Pentium4 2.5GHz, 1GB DDR RAM, 40GB System HDD, 120GB Video HDD, LG DVD-RW/-R Drive, Geforce4 FX5200 128MB Dual View Graphics, Pinnacle Studio Deluxe Analog/DV Capture Card, 19" FlatFace CRT Monitor, Win XP Home, 2-Year Warranty

\$3499

Flexirent from \$28 / week

Advanced Video Editor

Real Time Editing, DVD Authoring



Intel Pentium4 2.6GHz, 1GB DDR RAM, 40GB System HDD, 320GB Raided Video HDD, Geforce FX5200 128MB Dual View Graphics, Pinnacle DV5000DV Analog/DV Capture Card, Adobe Premiere 6.5, LG DVD-RW/-R Drive, 17" LCD Flat Panel Screen, Win XP Home, 2-Year Warranty

\$5799

Flexirent from \$45 / week

Xeon workstation

Superior Dual Processor Power



Dual Intel Xeon 2.4GHz Processors, 1GB Reg. ECC RAM, 36GB SCSI HDD, Integrated Dual Ultra320 SCSI Controller, Integrated Intel Ethernet, nVidia Quadro4 750 XGL 128MB DDR nView Multi-Display Graphics Card, 16x DVD ROM, 21" Philips 201B CRT Monitor, Win XP Pro, 2-Year Warranty

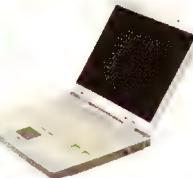
\$6199

Flexirent from \$47 / week

Power Laptops

Travelnote 1524K

3.6kg and 3.9cm thin Mobile all-in-one



Intel Pentium4 2.4GHz, 512MB RAM, 40GB HDD, 24x CD-RW & DVD Combo, ATI Radeon M7 64MB Graphics, 15.1" TFT, Modem, LAN, Front Music CD control panel, Firewire & USB Port, Win XP Home, 2-Year Limited International Warranty

\$2899

Flexirent from \$23 / week

Powernote 1525K

3.4kg and 3.9cm thin Maximum Performance on the go



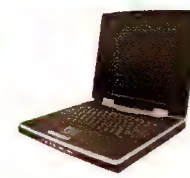
Intel Pentium4 2.5GHz, 1GB DDR RAM, 60GB HDD, 24x CD-RW & DVD Combo, ATI Radeon M9 64MB Graphics, 15.1" TFT, Modem, LAN, Front Music CD control panel, Firewire & USB2.0 Port, Win XP Home, 2-Year Limited International Warranty

\$3999

Flexirent from \$31 / week

Powernote 1526K

3.4kg and 3.9cm thin Mobile Digital Workstation



Intel Pentium4 2.6GHz, 1GB DDR RAM, 60GB HDD, 24x CD-RW & DVD Combo, ATI Radeon M9 64MB Graphics, 15.1" TFT, Modem, Ethernet, Music CD control panel, Firewire & USB2.0 Port, Win XP Home, 2-Year Limited International Warranty

\$4099

Flexirent from \$32 / week

Copyright 20030307 Digitac Pty Ltd. All prices include 10% GST. Illustrations for display purposes only. Errors and Omissions Excepted.

Stress-Free Webhosting!

Server101.com provides quality web hosting and ecommerce services worldwide. Server101 is known for it's outstanding customer service and affordable hosting.

- feature packed hosting plans
- integrated ecommerce
- fast technical support
- friendly customer service
- maximum reliability
- load-balanced servers
- resellers/affiliates welcome



plans start at
\$14.⁶⁰
per month
basic account



take advantage of our free domain + free month hosting offer by visiting www.server101.com today!

www.server101.com :: info@server101.com

Level 12/301 Coronation Drive Milton PO Box 1508, Milton BC Queensland Australia 4064 ph: 07 3876 6101 fx: 07 3876 5101 abn 18 084 840 451



CD COPYFAST

Professional CD-ROM Duplication Services

Super fast turnaround - up to 5000 discs in 24hrs

Custom Silkscreen Printing on Blank CD-R

Visit our web site for full range of CD services

sales@diskmax.com.au

www.diskmax.com.au

DISKMAX (02) 9699 3333

Powerleap CPU Convertors www.powerleap.com

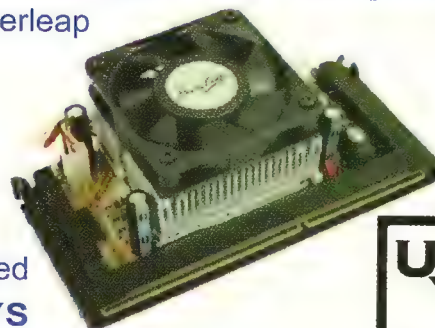
Upgrade Your Celeron or Pentium II to 1.4Ghz with Powerleap

PL-iP3/T Slot 1 Adaptor	\$99
P370/T Skt 370 Adaptor	\$99
With Celeron Tualatin 1.1Ghz CPU	\$205
With Celeron Tualatin 1.3Ghz CPU	\$225
With Celeron Tualatin 1.4Ghz CPU	\$260

30 Day Money Back Guarantee if Not Completely Satisfied

Upgrade Yourself Computers OPEN 7 DAYS

1c South Creek Road, DEE WHY 2099 ph 02 9982 9939 www.uyc.com.au



Plain wrap Prices - Black tie Service

Here is a sample of the great pricing you can get when you deal with Nutters.

Celeron® 1.7 System

- Intel® Celeron® 1.7GHz
- ASUS P4S533-MX, 3d Audio
- 256MB DDR RAM,
- 40GB HDD ATA 100
- 52X CD-Rom
- 1.44 Sony Fdd



\$490

NEC 1.8GHz M300

- Mobile Intel® Pentium® 4 1.8 GHz
- 14" TFT XGA ,256mb DDR,
- 40GB, CDRW, FDD, USB, Fire Wire
- 32mb Shared ATI Radeon , 3d Sound,
- Modem & 10/100 lan
- XP Professional

\$2195

NEC 1.6GHz M300

- Mobile Intel® Celeron® 1.6GHz Processor
- 14" TFT XGA ,256mb DDR,
- 20GB, DVD ROM, FDD, USB, Fire Wire
- 32mb Shared ATI Radeon , 3d Sound,
- Modem & 10/100 lan
- XP Professional

\$1795

Samsung TFT's

- 153V 15" TFT
- 1024 x 768 @ 76Hz

\$479

- 171S 15" TFT
- 1280 x 1024 @ 75Hz

\$799

- 191N 17" TFT
- 1280 x 1024 @ 75Hz

\$1396



Monitors

- 17" Samtron 76E \$188
- 17" Samsung 753S \$220
- 19" Mitsubishi 1998E \$370
- 19" Samsung 955DF \$464

TFT & Plasma

- 15" Mitsubishi DV159 \$499
- 15" Samsung 151S \$499
- 17" Mitsubishi DV172 \$795
- 17" Samsung 171S \$799
- 19" Samsung 191T \$1396

Memory

- 256MB DDR 333 \$49
- 256MB DDR 400 \$89
- 512MB DDR 333 \$95
- 256MB RDRAM 1066MHz \$199

Drives

- Western Digital 40GB \$110
- Western Digital 40GB 7200 \$130
- Fujitsu 36GB SCSI U320 \$368
- Samsung 52X24X52 S'ware \$82
- Samsung CDRW /DVD S'w \$149
- Sony DVD± Writer/S'ware \$695
- Samsung DVD / S'ware \$67
- Sony AIT SDX420CR \$994
- USB Flash Drive 64MB \$52
- USB Flash Drive 128MB \$79
- USB Flash Drive 256MB \$161

Motherboards

- ASUS P4533-MX \$114
- ASUS P4S8X-X \$149
- Intel D845GVAD2 \$148
- Intel D875PBZ 800MHzFSB \$297

Networking

- Switch 8 port 10/100 \$46
- 10/100 PCI Planet \$14
- 10/100 PCI Intel Pro 100S \$58
- Gigabit Intel® Card Copper \$99
- Gigabit Intel® Pro 1000 \$258
- Wireless 22Mb Dlink PCI \$133
- " 22Mb Dlink PCMCIA \$106
- " 22Mb Dlink Acc'point \$236

Misc

- A4 PS2 wheel Mouse \$5
- Optical Mouse USB \$19
- Black 101 Keyboard \$10

Altec Lansing

- AVS 200 2way Speakers \$28
- AVS 300 3way Speakers \$65

New Pentium 4 D875

- Intel® Pentium® 4 3GHz HT
- Intel D875PBZ 800MHz FSB
- Geforce 2 64mb MX400
- 512MB Dual Channel DDR
- 40GB 7200 8MB Cache
- 16 BIT Audio,
- 1.44 Flopp Disk Drive
- InWin J508 Micro Case
- 52X CDRom,
- Speakers 120Watt
- Keyboard Mouse & Mat



\$1824

New Intel Hyper Threading Pentium 4 Processor with 800MHz FSB & Dual Channel Memory

Digital Cameras

Canon A300

- 3.2 Mega Pixel,
- Still & Motion with sound JPG
- 5 x Dig Zoom
- 1.5" LCD Monitor

\$399

Creative 850

- 3.0 Mega Pixel
- 1.6" Colour LCD Monitor
- 16mb Memory

\$199

DVDRW Drives

- DVDRW± burner Kit
- Sony 500A IDE retail pack
- Mitsubishi DVDRW±
- OEM Bundle with Software

\$695

\$495

NEC Projector

NEC VT460 - LCD

- 1500 ANSI lumens SVGA (800 x 600)

\$2450

NEC LT220 - DLP

- 2000 ANSI lumens SVGA (800 x 600)

\$3785

NEC LT240 - DLP

- 1600 ANSI lumens XGA (1024 x 768)

\$4730

NEC LT260 - DLP

- 2100 ANSI lumens XGA (1024 x 768)

\$5390

Projector Screens

- 4:3 Manual \$395.00
- 4:3 Motorised \$1195.00
- 16:9 Manual \$395.00
- 16:9 Motorised \$1195.00

Nutters Wholesale

Dealer Inquiries Welcome

www.nutters.com.au

sales@nutters.com.au

Ph 1300 731733

Fax 1300 731734

All prices Include GST. Pricing correct as at 15/05/03 Prices subject to change without notice, Errors & Omissions Excepted
Advertised prices are cash only, 1% surcharge applies for credit card payment over \$200

Back-up security has just been dramatically downsized. Anypak Drive is the world's smallest & lightest portable external disk drive, small enough to fit in your pocket, yet with complete 20GB to 60GB back-up. Simply click, drag and drop all your files onto the Anypak! With easy installation on either PC or MAC utilising either USB 1.1/USB 2.0 speeds making it perfect for safeguarding against disastrous data loss, providing additional drives for networks, protecting against hacking while freeing up hard drive space.



Anypak drive™ www.anypakdrive.com.au
Call: (02) 9437 4114 | Fax: (02) 9437 1235

SPECIFICATIONS

Disk Capacity:
20GB, 30GB, 40GB & 60GB
Interface: USB 1.1/2.0
Size: 118 x 72 x 11mm
Weight: < 130 grams

Protect Your Business
from \$450



Anypak

matrix

microsystems

www.matrixmicro.com.au

'Your Discount Online Computer Store'

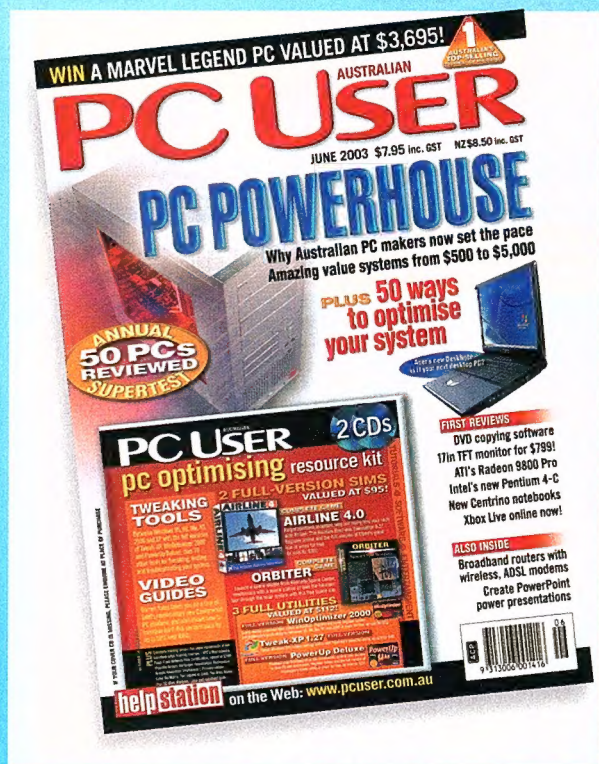
Prices as at 14/12/02

CPU's		ABIT - Socket A		8RDA+ nForce2		ATI 9700PRO 128MB		60GB 8MB cache	
INTEL		KD7		\$219.00		\$649.00		\$175.00	
Celeron 1.8GHz (socket 478)		KD7-RAID		\$249.00		ATI 9700PRO Ultimate 128MB		\$709.00	
Celeron 2.0GHz (socket 478)		AT7-MAX		\$249.00				80GB 2MB cache	
P4 1.8GHz (400MHz FSB)		AT7-MAX2		\$249.00				80GB 8MB cache	
P4 2.4GHz (533MHz FSB)		NF7-S nForce		\$255.00				120GB 2MB cache	
P4 2.4GHz (533MHz FSB)		NF7-M nForce w. VGA		\$275.00				120GB 8MB cache	
P4 2.53GHz (533MHz FSB)		ASUS - Socket 478							
P4 2.66GHz (533MHz FSB)		P4PE		\$209.00					
P4 2.8GHz (533MHz FSB)		P4PE-SATA GB LAN		\$299.00					
P4 3.06GHz (533 MHz FSB)		P4GBX Gold		\$349.00					
AMD (incl. fan/heatsink & 3 Yr AMD warranty)		P4GBX Gold Del.		\$399.00					
XP 2000+		P4GE-V		\$299.00					
XP 2100+		ASUS - Socket A							
XP 2200+		A7V333/A		\$149.00					
XP 2400+		A7V8X		\$165.00					
XP 2600+		A7V8X GB-LAN SATA		\$245.00					
XP 2700+		A7N8X nForce2		\$239.00					
		A7N8X Deluxe nForce2		\$279.00					
		EPDX - Socket 478							
		4G4A		\$209.00					
		4G4A+		\$229.00					
		4G4M+		\$199.00					
		4T4A		\$299.00					
		EPDX - Socket A							
		8K9A1		\$179.00					

Visit www.matrixmicro.com.au to view our extensive product range and purchase direct.
Phone (02) 4295 3998 Fax (02) 4297 8744 PO Box 158, Shellharbour Square, NSW 2529 email: sales@matrixmicro.com.au

Secure online purchasing provided through ANZ e-Gate® All Prices Include GST, Payment by Credit card (Bankcard/Mastercard/VISA), Direct Deposit, Bank Cheque or COD. Prices subject to change without notice.

- An audience of active technology buyers
- Authoritative editorial environment for your advertising
- High rates of response for excellent return on your investment



To book your advertisement or for more information, contact Jules Flakelar on 02 9288 9158
Email: jflakelar@acp.com.au

PC USER AUSTRALIAN

Sound BLASTER[®] Audigy²™ PLATINUM

the ONLY sound card that
**PLAYS BACK
DVD-AUDIO & MORE**

Sound Blaster 24-bit ADVANCED HD™ represents the finest 24-bit audio entertainment you can get on the PC. Through the use of ingenious, state-of-the-art analog audio design/circuitry, premium audio components and high-resolution audio processors, you can experience an improvement in audio quality up to 8x over 16-bit audio.

for more details check out www.australia.creative.com



FULLY LOADED WITH UNBEATABLE FEATURES!

106dB SNR

8 TIMES BETTER SOUND QUALITY

Astounding 106dB SNR audio quality compared to regular 16-bit audio card at 90dB SNR.



THE ONLY THX® CERTIFIED SOUND CARD

Endorsed by the audio experts in the movie industry for the most awesome cinematic experience.



THE ONLY DOLBY® CERTIFIED SOUND CARD FOR DOLBY DIGITAL EX

Get True Dolby Digital EX support for rear movie centre channel for intensified 6.1 movie realism.



RECORD AT THE HIGHEST POSSIBLE AUDIO FORMAT OF 24-BIT/96KHZ

Capture all the subtle details of the original recording with pure audio recording path.



THE 1ST MEDIA PLAYER WITH DVD-AUDIO PLAYBACK

Playback DVD-Audio discs at 24-bit/192 kHz in stereo or 24-bit/96kHz in 5.1 mode.



ULTRA IMMERSIVE 6.1 SURROUND SOUND EXPERIENCE

Enjoy automatic 6.1 positional audio on any games which support 3D audio.



POWER UP WITH CREATIVE'S EAX ADVANCE HD™

Gives you the most realistic music playback and immersive gameplay.



SUPER-FAST SB1394 PORT

Transfer audio/ video content at blazing speed of up to 400Mbps.



Sound Blaster Audigy 2 Platinum

Superior 24-bit ADVANCED HD audio technology for your music, games and movies. Also comes with convenient front panel connectivity for expanded options.



Sound Blaster Audigy 2

Get the best of digital music, gaming and movie experiences with the superior 24-bit ADVANCED HD audio technology!



**Recommended Companion
Creative Inspire 6.1 6600**

Hook up Creative Inspire 6.1 6600 to Sound Blaster Audigy 2 and experience spectacular 6.1 desktop entertainment with Dolby® Digital EX encoded movies, and incredible EAX® and Microsoft® DirectSound® 3D effects in games.



WARNER VISION



For a list of all DVD Audio titles available visit www.warnervision.com.au



CREATIVE
CREATIVE LABS PTY LTD

Creative Labs Pty Ltd. Locked Bag 5000 Banksmeadow NSW 2019
Tel (02) 9666 6100 Fax (02) 9666 6900 www.australia.creative.com

Print your photos at home for only \$449 rrp

6" x 4" borderless photos in 90 seconds

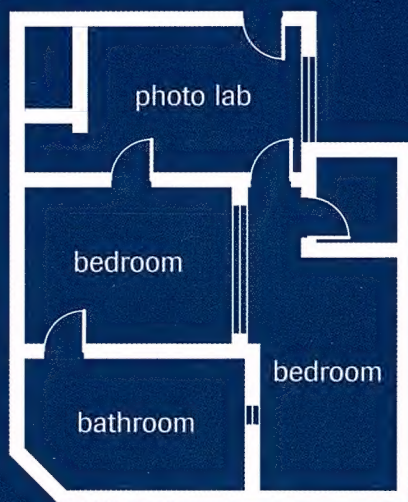
Direct photo prints from camera's memory card

No computer required

Scan and copy in high resolution

canon.com.au 1800 021 167

imageCLASS MPC200 Multifunction



Canon
advanced simplicity™